

# The Mining Journal

## RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 300.—Vol. XI.]

LONDON: SATURDAY, MAY 22, 1841.

[PRICE 6D.]

### PUBLIC COMPANIES.

#### MEETINGS.

**BAHIA STEAM NAVIGATION COMPANY.**—Notice is hereby given, that a GENERAL MEETING of the proprietors of the Bahia Steam Navigation Company will be held on Thursday, the 27th of May next, at the George and Vulture Tavern, George-yard, Lombard-street, at Twelve for One o'clock precisely, for the purpose of considering the property of an absolute and entire dissolution of the said company.

By order of the board of directors,  
CHARLES SAUNDERS, Hon. Sec.  
Bahia Steam Navigation Company's office, Lombard-street Chambers,  
Clement's-lane, London, April 26.

**BAHIA STEAM NAVIGATION COMPANY.**—The proprietors of this company are hereby directed to take notice, that the DEED of SETTLEMENT is now LYING for SIGNATURE at the office of Messrs. Kearsey, Hughes, Thomas, and Masterman, No. 17, Bucklersbury, the solicitors to the company; and that by the provisions of the said deed, no proprietor can be allowed to vote in any matter connected with the business of the said company until he shall have executed the deed of settlement.

By order of the board of directors,  
CHARLES SAUNDERS, Hon. Secretary.  
Bahia Steam Navigation Company's office, Lombard-street Chambers,  
Clement's-lane, London, April 26.

**COLOMBIAN MINING ASSOCIATION.**—The SIXTEENTH GENERAL ANNUAL MEETING of the proprietors of this association will be held at the office of the association, on Thursday, the 17th day of June next, at Two o'clock precisely. At this meeting three directors will be elected, in the place of J. D. Powles, Esq., John Routh, Esq., and Thomas Wilson, Esq., who go out by rotation, but are eligible to be re-elected.

By order of the board of directors,  
Office, 15, Austinfriars, London, May 20. JOHN CHAPMAN, Sec.

**LANELLY RAILWAY AND DOCK COMPANY.**—The ANNUAL GENERAL MEETING of proprietors will be held at the London Tavern, Bishopsgate-street, in the city of London, on Monday, the 7th day of June next, at half-past Twelve for One o'clock precisely.

By order of the committee of management,  
Old Broad-street, London, May 7. JOHN BIGG, Secretary.

**MEXICAN AND SOUTH AMERICAN COMPANY.**—The SIXTH ANNUAL GENERAL MEETING of the proprietors of shares in the Mexican and South American Company will be held at the office of the Anglo-Mexican Mint Company, No. 9, New Broad-street, on Wednesday, the 9th day of June next, at One o'clock precisely. At this meeting two directors will be elected, one in the place of John Schneider, Esq., who retires, but is eligible to be re-elected, and one who will be proposed to the meeting in addition to the present directors.

No. 10, New Broad-street-mews, May 20. H. W. SCHNEIDER, Sec.

**NEW GRANADA MINING COMPANY.**—Notice is hereby given, that the SIXTH GENERAL ANNUAL MEETING of this company will be held at the office of the company, on Thursday, the 17th day of June, at Three o'clock precisely. At this meeting one director will be elected, in the place of Edward Hurry, Esq., who goes out by rotation, but is eligible to be re-elected.

By order of the board of directors,  
13, Austinfriars, London, May 20. JOHN CHAPMAN, Sec.

**ST. JOHN DEL REY MINING COMPANY.**—The Eleventh ANNUAL GENERAL MEETING of the proprietors of the St. John del Rey Mining Company will be held at the company's office, 8, Tottenham-yard, Leith-bury, on Friday, the 28th instant, at Two o'clock precisely. At this meeting two directors will be elected—one in lieu of Edward Hurry, Esq., who goes out by rotation, but who is eligible, and one in lieu of James Mackenzie, Esq., deceased.

8, Tottenham-yard, May 6. GEORGE D. KEOGH, Sec.

**DANESCOMBE COPPER MINING COMPANY.**—Notice is hereby given, that a CALL of TEN SHILLINGS per share was this day made by the directors on the shareholders of the above mine, to be paid on or before the 10th day of June next, at this office.

26, Birch-lane, London, May 12.

**EAST TRETOIL MINING COMPANY.**—Notice is hereby given, that the period limited by the regulations of the company for the payment of the first CALL of FIVE SHILLINGS PER SHARE, having expired on the 10th current, all shares upon which the said call shall remain unpaid on the 10th June next will then be declared absolutely FORFEITED.

By order of the board of directors,  
East Tretoil Mining Co., 6, St. Mildred's-court, May 19. S. BUXTON, Sec.

**RIO DE ANORI GOLD STREAM-WORKS COMPANY.**—Notice is hereby given, that the call of 10s. per share, made on the 24th day of August, 1839, was, at a General Meeting of the above company, on the 25th day of February last, rescinded, and a NEW CALL of TEN SHILLINGS per share made, which must be paid to Messrs. Stone, Martin, and Co., Lombard-street, bankers to the company, on or before the 22nd day of May now instant, as all shares will be declared forfeited on which such call shall not then have been duly paid, agreeably to the conditions of the company.

By order of the directors,  
2, Cloak-lane, City, May 17. SAMUEL HARPER, Sec.

**N.B.** Upon producing the bankers' receipt for the 10s. call at the office of Mr. S. Harper, he will duly endorse the payment of the call on the original shares.

Notice is hereby also given, that it is the intention of the directors of the above company to return the call of 10s. per share now made to each person who shall pay the same, provided the directors find the present call inadequate to the purposes of the company.

**ANGLO-MEXICAN MINT COMPANY.**—At the Annual General Meeting of shareholders, held on the 4th inst., J. D. Powles, Esq., was re-elected a director, and Henry William Schneider, Esq., was elected a director in the place of B. St. W. Esq., resigned, and resolutions were passed, declaring TWO half-yearly DIVIDENDS of TWELVE SHILLINGS per share each, both payable on and after the 1st of June next. Three clear days' notice of claim will be required, forms of which are to be obtained at this office, as under, hours of attendance from Eleven to Three.

G. B. LONSDALE, Sec.  
8, New Broad-street, London, May 18.

**ON SALE.—TWO LOCOMOTIVE ENGINES FOR RAILWAYS.**—4 feet 6 inches gauge; large copper fire-box, and 120 horse power, 2 cylinders, driving wheels, 5 feet 6 inches diameter, and two pairs carry-wheels, 4 feet diameter, 12-inch cylinders, and 18-inch stroke. Made by one of the first makers in Lancashire, perfectly new, and could be delivered immediately.—For further particulars apply to JOSEPH JOHNSON, Iron Merchant, &c., Cannon-chambers, Liverpool.

Liverpool, May 21.

**THE ONLY PAPER EXCLUSIVELY DEVOTED TO RAILWAY INFORMATION.**—THE RAILWAY TIMES, published weekly, price 6d. stamped, contains full and accurate reports taken exclusively for this paper of a railway meetings, with directors' and engineers' reports, and other official documents at length; authentic reports of the progress of railway works; notices of railway publications and plans; all the public and private proceedings of Parliament on railway bills; notices of railway improvements of every kind; detailed reports of all new lines affecting railways; the fullest particulars of the rise and progress of foreign railways; complete railway share lists for London, Liverpool, and Edinburgh; railway traffic returns; and a great variety of extensive information. The Railway Times is an excellent medium for railway and scientific advertisements.

Published every Saturday morning in time for the Morning Mail; office, No. 172, Fleet-street, opposite St. Bride's Church, London; and may be had of authorized agents in Liverpool, Birmingham, Manchester, Bristol, Bath, and Edinburgh; also by order of all booksellers and newsmen in towns and country.

**THE INVENTORS' ADVOCATE, AND JOURNAL OF INDUSTRY.**—A WEEKLY BRITISH AND FOREIGN MISCELLANY OF SCIENCE, INVENTIONS, MANUFACTURES, AND ARTS, is the most useful and comprehensive work of the kind published. It contains the extensive intelligence of the week, correct information on railways and steam navigation; list of patents granted and expired; specifications and descriptions of new inventions; reports of scientific meetings; and original papers on manufactures and the arts; with a variety of information interesting to inventors and patentees. It is not only a journal of interest for the day, but forms a standard work of reference, valuable to persons engaged in scientific, manufacturing, and mechanical pursuits. Vols. 1, 2, and 3, bound in cloth, are already published, and the 4th Vol. is now in course of publication. The Inventors' Advocate, price 5s. per annum, postage free, is published weekly, by the proprietors, at the patent office, No. 10, Strand, London.

### STANNARIES OF CORNWALL.

#### IN THE VICE-WARDEN'S COURT.

**PURSUANT** to a decree of the Vice-Warden's Court, made in a cause of "MORCOM and others v. CODNER and others," the creditors in respect of the CUDDRA CONSOLIDATED MINES, in the parish of St. Austell, within the said Stannaries, are, on or before the 31st of May instant, to come in and prove their debts before the registrar of the said court, at his office, in Truro, or in default thereof they will be peremptorily excluded the benefit of the said decree.

COODE, SONS, and SHILSON, solicitors, St. Austell.  
PAUL and ROBERTS, solicitors, Truro.  
Dated 6th May, 1841.

### STANNARIES OF CORNWALL.

#### IN THE VICE-WARDEN'S COURT.

**WHEREAS** the Vice-Warden did, on the 10th day of April last, order, by consent of the defendants, that a sale be made of (amongst other things) the MACHINERY and MATERIALS, and belonging to the CUDDRA CONSOLIDATED MINES, in the parish of St. Austell, within the said Stannaries, under the direction of the registrar of the court, and that the proceeds of such sale should be applied by the said registrar, in the manner directed by the decree in the above-mentioned cause. Notice is hereby given that, pursuant to the said decree, a PUBLIC AUCTION will be held at the Cuddra Consolidated Mines, aforesaid, on Monday, the 24th day of May instant, and following day, at Eleven o'clock in the forenoon of each day, for selling, either together or in lots, the undermentioned quantity of wrought and cast iron; an iron safe, tram waggon, chains, several whelm bladders, vices, blocks with brass sheaves, brass seatings, bushings and bearings, brass and iron sieves, several basins, scales, and weights, a large quantity of timber, several ladders, tin frames, boulders, and shales, old bricks, ladders, counting-house furniture, &c.

For viewing the same, application may be made at the mines; or to Mr. Codner, Lynn's Hall, St. Austell; and for further particulars (if by letter, post paid) to Messrs. Coode, Sons, and Shilson, solicitors, St. Austell; or to Messrs. Paul and Roberts, solicitors, Truro.—Dated May 12, 1841.

Shares in the Assam Tea Company, the London Commercial Sale Rooms, National Insurance Company, British and Irish Steam Company, United Mexican Mining Company, London Institution, and Public Ledger.

**MESSRS. SHUTTLEWORTH AND SONS** are instructed by the assignees to include in the next Periodical Sale of Reversionary Interests, &c., appointed to take place at the Mart, on Friday, June 4, at Twelve, several SHARES in the public companies and institutions above mentioned. Particulars may be had in due time of Wm. Pennell, Esq., official assignee, 31, Basinghall-street; of Messrs. Freshfield, solicitors, New Bank buildings; at the Mart; and of Messrs. Shuttleworth and Sons, 28, Poultry.

### VALUABLE COPPER MINE, BEDDLEGERT, NORTH WALES.

**MR. C. WARTON** begs respectfully to invite the attention of capitalists to the SALE, BY AUCTION, at the Mart, London, on Wednesday, 10th of June, at Twelve o'clock, of ONE FOURTH PART or SHARE of and in the LEWYNDU, or BLACK BUSH MINE, within three miles of Llanfair, and eight from Port Madoc (the shipping harbour). The mine is in the hands of a highly respectable manager, by whom operations, to the extent of 4700, have been most judiciously effected, by which there have been about 400 tons of ore raised, and 1700 tons laid open between the ten and twenty fathom levels. The works are conducted with every attention to economy, and, from the fall of the ground, steam power is not requisite. The dues are fixed for twenty-one years, at one-twelfth. The purchaser will have the advantage of coming in when the mine has nearly arrived at maturity; and it is confidently submitted, that there are few mining investments which promise the possessor more beneficial returns for his capital.

Printed particulars may shortly be obtained, and every information cheerfully afforded by David Oswald, Esq., White Lion-court, Cornhill, London; Mr. G. F. Stroud, Swansea; and of Mr. C. Warton, auctioneer and estate agent, 26, Thread-needle-street.

### BRADLEY IRON WORKS AND HALLFIELD'S COLLIERY AND FURNACE, NEAR BILSTON.

**TO BE SOLD, BY PRIVATE TREATY, OR TO BE LET** (with immediate possession as to that part which is in hand, and as to that under lease, after the expiration of the lease), the above-named property, situate in the midst of the South Staffordshire mining district, intersected by the upper level of the Birmingham Canal on which are several convenient wharfs, and surrounded by good roads. The iron works, which comprise an excellent large and mill, recently erected, and worked by engine, one of 28 and the other of 80 horse power, capable of making 160 tons per week of bar, sheet, hoop, and rod iron, are let to Messrs. G. and E. Thorneycroft, under an agreement for a lease, which will expire at Christmas, 1841.

The furnace and colliery are at present worked by the proprietors, and may, therefore, be taken possession of immediately. The mines remaining to be gotten are the whole of the New Mines and Heathen coal, under about sixty acres of land, together with the ribs and pillars of thick coal under such land, which are considered very valuable, the same not having been wrought (so any extent) since the first working over of the measure, twenty to thirty years ago. There is also some thick coal, in the whole, remaining to be gotten—also, the Gribbin ironstone under a good part of the waky area, and some Pice and Rod and Branch coal. There are numerous pits sunk through the thick coal, and there is a powerful mine of pumping water for draining the water, together with two winding engines (with 21 and 26-inch cylinders, glass, pit-frame, railways, railway waggon, and all necessary colliery utensils).

The furnace, besides the usual erections connected with a furnace, has also a refinery, cupola, air furnace, and spacious foundry (with powerful crane), stores, and other conveniences for foundry purposes. It has also an improved apparatus for heating the blast, and a water balance, which raises the clinders and the materials for filling the furnace to the same level, so that the former are thereby wheeled away at a very trifling expense. The estate also comprises two extensive potteries and two brick works, for which there is an ample supply of the several sorts of clay used—also, sundry dwelling houses, one of which is suitable for the residence of an agent or manager, and convenient offices. The surface of the freehold is very valuable as building land, for which there is a great demand. The purchase-money, in case the premises are sold, will be accepted by instalments, to suit the convenience of purchasers, or a portion of it may remain on mortgage, if wished.

Mr. John Drumming, the agent at the works, will show the premises, and tenders for leasing or purchasing them are requested to be addressed to John Finckell Madocks, Esq., of Chester; or to Messrs. Wagstaff, Son, and Marsh, solicitors, Warrington, from either of whom further particulars may be learnt.

### ADVANTAGEOUS INVESTMENT OR PARTNERSHIP.

**TO BE SOLD, THE WHOLE OR PART OF A VALUABLE COLLIERY.**—A hold under lease at moderate royalty rents, and situated in South Wales, about two miles distant from a good port, to which ships of the largest class resort for coals, and to which there is a good railway from the colliery. The coal is of an excellent quality, and renowned for household purposes, steam engines, manufactures, export works, &c., of which there are several in the immediate neighbourhood. There are two series of coal extending over about 100 acres, and all the necessary pits, levels, &c., are opened, and proper engines are erected for the full working of the colliery. The quantity of coal sold during the last year amounted to nearly 21,000 tons, upon which a good profit was realized, and the sale may be considerably increased by the exertions of an active partner or proprietor;—as, for example, in the London market, where the coal is hitherto unknown, but for which they are extremely well suited. The engines, machinery, &c., to be taken as a valuation, and the stock on hand (which is small) at the working price; and, if required, a part of the purchase money may be allowed to remain on mortgage of the property. So good an opportunity has been seldom offered for investing capital, or for commencing an active and lucrative life of business, and well deserves attention, as the capital required, even for purchase, is small. For further particulars, apply to Messrs. Dunn and Bloor, milliners, No. 2, Raymond-buildings, Gray's Inn, London.

### VALUABLE SEA AND LANDSALE COLLIERY.—THE

owners are desirous of SELLING, BY PRIVATE CONTRACT, all the extensive and well-known COLLIERY, distinguished by the name of BUTTER-ROCKS and CORLEY RENT, in the county of Durham, comprising about 1000 acres, with all the other necessary for working it on an extensive scale. The works are at Darlington, with one of its branches, the Clarence, and Blackton and Hartington railways, connected it thoroughly with the shipping ports of Stockton, Middlesbrough, Port Clarence, and Hartington. The extensive landsale trade, in the county of Durham and York, is also much extended by the opening of the Great North of England Railway. The coal is in great demand for housewarming, gas manufacture, and sundry purposes.

Further particulars and conditions of sale may be had of Mr. Thomas Storey, of St. Helen's Church; Mr. John Fawcett, solicitor, of Newcastle-upon-Tyne; Mr. W. B. Smith, solicitor, of Darlington; or of Mr. M. Foster, agent at the colliery, until the 1st of June next ensuing.

Butter-ROCKS Colliery, near Middlesbrough.

### RIGHT OF MINING ON CROWN LANDS IN NEW BRUNSWICK.

#### MINING LOTS IN WESTMORLAND, NEW BRUNSWICK.

Crown Land Office, New Brunswick, March 20.  
Public notice is hereby given, that the following districts in the county of Westmorland—viz.: Beginning at the south-west angle of Mining Lot No. 1 (already leased to John Alexander and others), about three miles north-west from the town of Dorchester, thence running by the magnet north 2 deg. east three miles, thence north 88 deg. west twelve miles, crossing the River Petibouche in that distance, thence south 2 deg. west six miles, thence south 88 deg. east fifteen miles, again crossing the Petibouche River, and passing to the southward of Dorchester, thence north 2 deg. east three miles, and thence north 88 deg. west three miles to beginning, comprising a part of the parish of Dorchester, and the greater part of Millborough, will be marked off into mining lots or blocks of three miles square, on each side of a centre base line to run north 88 deg. west, from the south-west angle of mining lot No. 1 above mentioned, and numbering from lot No. 1 to No. 16, agreeable to a plan or diagram of the same, to be seen either at this office or with the clerk of the peace in Dorchester.

**THE RIGHT OF MINING** on each lot, separately, will be OFFERED FOR SALE, AT PUBLIC AUCTION, at this office, on Monday, the 14th day of July next, at Twelve o'clock, noon, subject to the regulations and conditions herewith published, and any amendment or addition thereto, which may be made by His Excellency the Lieutenant-Governor in council before the day of sale, of which amendment or addition due notice will hereafter be given in the *Napal Gazette*.

The expense of surveying or marking the base line will be proportionally divided immediately after the sale, between the lots which may be sold; and the proportionate part of the expense of survey will be required to be paid in addition to the purchase-money, and at the same time.

JOHN G. SAUNDERS, Surveyor-General.

### REGULATIONS AND CONDITIONS.

1. That the upset price on each lot be £50 (fifty pounds), and the whole amount of the purchase money on each lot to be paid on the day of sale to the receiver-general, or other person authorized to receive the same.
2. That the right of mining on each lot be separately put up for the term of twenty-five years, at a fixed rent of 5 per cent. on the value of the minerals raised, with the exception of coal, on which a duty of 1s. currency per chaldron shall be paid quarterly, on the 1st January, 1st April, 1st July, and 1st October, in each year, to the receiver-general, or an agent for that purpose to be appointed by the Government.
3. That two years be given to each purchaser, from the day of sale, to explore and select his mining ground, within the lot purchased by him, which ground on to be selected is in no case to exceed three miles square. But no mining operations are to be commenced or prosecuted until the lease be taken out.
4. That the purchaser of each lot, after having explored and selected his ground, shall cause a survey and plan thereof to be made by some duly authorized deputy-surveyor of the province, and filed in the office of the surveyor-general; and that after such plan shall have been confirmed at the said office, a lease of the mines comprised therein shall be forthwith made out in accordance therewith.
5. That after the said lease is executed and delivered, the lease shall be allowed to work the said mines for three years, free of any rent or charge.
6. That if the lessee shall not have actually commenced mining within two years after the date of the lease, the same shall be forfeited.
7. That if the rent be behind or unpaid for the space of thirty days after the same shall become due, the lease shall be forfeited.
8. That the lease contain a clause of reversion, and that the Government may take the improvements at a valuation, to be made by arbitrators mutually chosen by the surveyor-general for the time being, and by the lessee or his assigns.
9. That in no case shall a lease be executed for more than three miles square.
10. That if the lessee or his assigns shall neglect to work the mines within his lease for any one year during the continuance thereof, the said lease shall be forfeited, and revert to the Crown.

### NOTICE TO THE CONSUMERS OF C. & O. STEEL.

**MESSRS. JOS. SYKES AND SONS**, the Sole Contractors for and only importers of, these descriptions of STEEL IRON, being determined to adopt every practicable expedient to protect the fair trader in and consumer of these several marks, HEREBY GIVE THIS PUBLIC NOTICE, that, from the 1st March, 1841, no iron of the above marks has been, or will be, delivered by them, (without the additional mark of SYKES) being impressed thereon; such last-mentioned mark having been adopted by Messrs. Jos. Sykes and Sons for the better protection of themselves and the public; and all persons who shall import such mark upon any bar-iron, either with or without the additional mark SYKES will be proceeded against.—Hull, May 11.

### SAFETY ROTATION RAILWAY COMPANY.

To be incorporated by Act of Parliament.  
Capital £200,000, in 10,000 shares of £20 each, with power to increase the same.  
Deposit £1 per share.

**CHAIRMEN.** John Pirie, Esq., Ald. John Waddell, Esq.  
**DIRECTORS.** Colthart Rippon, Esq., M.P. Mr J. M. Doyle, K.C.B.  
Thomas Kelly, Esq., Ald. Richard Musgrave, Esq.  
Joseph Thompson, Esq. Thomas Fowle, Esq.  
Francis Nixon, Esq. Captain Ewbank  
William B. Ramsey, Esq.  
**AUDITORS.** G. F. Minton, Esq. J. Finlay, Esq.  
Bankers.—Messrs. Ludbrooke, Kingdon, and Co.

The above-named company has been formed with a view to introduce to public attention a projected improvement in the construction of railways, from which it is confidently expected that the most important benefits will be derived by the country at large. It may suffice briefly to state, that the proposed advantages over the prevailing system which the new principle offers are—

1. The preservation of life and property from those calamitous accidents which have lately so frequently occurred, combined with facilities for travelling with equal speed and increased comfort and security, at diminished rates. And
  2. A considerable saving of expenditure, inasmuch as a railway on the plan proposed (which will almost supersede the necessity of tunnelling or embanking) may be constructed in less time and at two-thirds of the cost of one of similar extent now in ordinary use, and the annual charge of repairs be reduced by 75 per cent.
- Enterprising a free conviction that this novel and truly excellent invention is not only eminently adapted to answer the purposes contemplated by the ingenious proprietor, Mr. Rangely, but to open to capitalists a channel for profitable investment in the promotion of an enterprise of great national interest, the company propose to prefer the fairest terms in encouragement and support by contributing, in the first instance, a railway of sufficient dimensions to enable the public to judge of its efficiency when carried into more extensive operation; and, for such purpose, to limit the liability of persons becoming shareholders to a deposit of £1 only on each share taken, beyond which no further and no responsibility can be incurred, until the success of the experiment shall have been ascertained, of which no doubt exists.

Models and drawings of the proposed railway may be seen and examined, and prospectuses, containing every requisite information, obtained at the company's offices, 1, Watbrook buildings, Watbrook, London, where application for shares may be made.—London, May, 1841.

### ANDREW SMITH'S PATENT WIRE ROPES, for standing

rigging, lighting conductors, drawing of blocks, mining, railway, and general purposes; about half the size and weight of common ropes, and 25 per cent. cheaper. Testimonials to that effect, with specimens, may be seen, and every information obtained, at the office, 71, Old Broad-street, City; 59, Prince-street, Leicester-square; Manchester, Mill-st. Mill, Piccadilly; and also of the following agents:—

Robertson and Co., 12, Grace-Place, Liverpool.  
Mathias Dunn, Newcastle-on-Tyne.  
Joseph Borthwick, Plymouth.  
John Thompson and Co., Wigton.  
J. Y. Tregollue, Truro.  
Thomas Money and Son, Bristol.  
Coxes and Young, Belfast.  
James Elliot and Co., Glasgow.  
James Green, London.

This rope has been in use for standing rigging in his Majesty's Navy, and is a great number of merchants' ships, for upwards of five years, and is giving the highest satisfaction; the rope is also employed in various mines and railways in different parts of the kingdom, but reference is especially made to the Blackwall Railway, where its capabilities have been most severely tested, for although it has been in use upwards of eight months, and has travelled a distance nearly equal to the circumference of the earth, it is, in all appearance, as good as when first applied.

### THE PATENT SAFETY FUSE.

**FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMERSIBLE OPERATIONS.**—This article affords the safest, strongest, and most expeditious mode of effecting this very hazardous operation. From many instances to its excellence with which the Manufacturers have been furnished from every part of the kingdom, they select the following series, recently received from John Rogers, Esq., F.R.S., &c., &c.

"I am very glad to hear that my recommendations have been of any service to you. They have been given from a thorough conviction of the great utility of the Safety Fuse; and I am quite willing that you should employ no other as yet."

Manufactured and sold by the Patentee, RICKFORD, SMITH, and SONS, Cambridge, Cornwall.



INFRINGEMENT OF PATENT FOR THE USE OF HOT-BLAST.

[The great importance attached to the recent trial for an alleged infringement of Mr. Neilson's patent, for the application of the hot-blast to furnaces (the results of which were briefly stated in our Journal of the 5th inst.), induces us to give the following detailed report of the proceedings, for the particulars of which we are mainly indebted to the *British Queen*, and to our able contemporary, the *Inventors' Advocate*.]

Mr W. FOLLETT, in opening the plaintiffs' case, said he could not conceive what could be the line of defence the opposite party intended to take, as a more evident and barefaced invasion of a legal right could scarcely be conceived. This was no ordinary case, for Mr. Neilson's invention was, perhaps, the most valuable that ever was introduced; in fact, it was scarcely possible to exaggerate its usefulness, which he was prepared to prove by the evidence of the most scientific men in the kingdom, and that of several iron masters connected with the manufacture of iron for many years. Mr. Neilson having obtained his patent as far back as 1828, was naturally desirous of maintaining his right for the short space to run, knowing that to smelt iron beneficially, all persons embarked in the business should obtain licences from him; as, indeed, all others using his apparatus had done, with the exception of the defendants. The learned counsel then entered into a lengthened description of the hot-blast, as applied to smelting iron, and its beneficial results, which he clearly demonstrated. He also pointed out the close similarity of the defendants' mode of applying the hot-blast to that of the plaintiffs'; and he contended, that such an application was a decided infringement of the patent.

Mr. Pearlee, a proprietor of Low Mulr Iron Works, who has had forty years' practical experience in the smelting of iron, Mr. Farey, Professor Dunlap, Mr. Kirkham, and Mr. J. T. Conner, were subsequently examined and cross-examined at great length. The substance of their evidence confirmed that of the first witness, though they differed in opinion whether the description in the specification was such as to enable an ordinary mechanic to construct an available apparatus for the application of the hot-blast.

On Thursday morning the ATTORNEY GENERAL addressed the court and the jury on behalf of the defendant. He said that the various scientific and practical men who had been examined on the trial were of different opinions as to the mode in which a man of ordinary skill and ability would attempt to carry the invention into operation, from reading the specification. In the case of the "King's Wheeler," for an infringement of a patent for a new mode of drying and making mail, a rule was laid down by Lord Tenterden, that a specification which cast on the public the expense and labour of experiments and trials was undoubtedly bad. Now, in this case, one witness stated that he would begin with a small quantity of material, and would make a trial of it in the form of a test card, and a third stated that he would adopt the bottle form. In the

tion there was no diagram, no plan, no lines or figures, in short, there was nothing of instruction whatever to guide the operative in the construction of the apparatus. There was also this additional objection, that it was impossible for any one who might read the specification to state for what the claim was made. Now this was obviously a monopoly which excluded the public from the use of an invention, of which no plan had been marked out to show whether the adoption of it would be an infringement or not. Mr. Nelson's title was, "An improved application of air to produce heat in fires, forges, and furnaces," but he did not specify a means by which the communication between the blow-pipe apparatus and the furnace, instead of being a working pipe, the whole specification was full of "inlets and outlets," and admitted of, thus defying a mechanic to carry the invention into effect. The plaintiffs had called witnesses from Wales, from all parts of England, and from various towns in Scotland, but these witnesses spoke merely as to specific views, opinions, and not on a world as to the mode in which the blast was to be applied to the smelting of iron. The specification gave no information as to how the process was to be carried into operation; on the contrary, it misled the public as to the size of the vessel in which the air was to be heated in proportion to the furnace for which it was required, and it gave false information as to the material of which the vessel was to be made. It did not tell them the difference in the application to a blast furnace and to the smelting of iron. He had only did not point out the tubular form employed and adopted by the defendants, and he had not reflected to consider an infringement of his patent, but he actually concluded it as

together. The first case of the specification stated that the discovery was to increase the heat by heating the air, but it was clearly shown that everything depended on the form of the vessel, for, if it was not tubular, it would be of no use. Not only was there no suggestion of a succession of horizontal and vertical tubes, but this plan was altogether excluded, and only one vessel was contemplated by the specification, and that was of the form desired. The air was to be passed into a vessel made sufficiently strong to resist the air pressure, the vessel was to be fired, by means of a pipe, tube, or aperture, into the fire, from the furnace; from which it was evident that Mr. Neilson contemplated that the air was to go right through in a current. The tube could not be considered as a part of the heating vessel, the operation of heating the air was accomplished before the tube was brought into operation. The specification next stated that the air vessel consisted of metal or iron, but it was not inconsistent, other materials might be used, as, for example, as to the material intended to be prepared by the quantity of heat and heat to be produced. Now, in the invention, the purpose was to increase the heat, the air had not been increased, for if those directions had been followed, it would have signally failed. He contended that it was constructed on an entirely different principle, and that the specification of the plaintiff was an entire misdirection. In the case of a smith's forge, where there was only a cubic foot of air to be heated, it might do very well, but, when they enlarged it, it would not heat the same quantity of iron, or produce the same effect. The required effect was by changing the form of the vessel, and, instead of having the air pass in a tubular form, as put they were told in the plaintiff's specification, that the form of the vessel was altogether immaterial. The plaintiff admitted that he had fired the rectangular form, and stated that it would not answer. It will now admitted on all

said that as far as the production of heat was concerned, everything depended on the form of the vessel, instead of its being immaterial. An inference was deduced when they employed a series of vessels in the tubular form; and how they were to interpret the results was not clear. Why, by substituting by them the windings to imitate into the coiled condition, they were to conclude that they entirely contradicted the whole tenor of it. If all the witnesses had told them that they were allowed, in the first place, to the heating surface, and, in the second, to having a proper current of air between the apparatus and the blast-furnace. The specification consisted of that which it should have included, and included that which should have been omitted. Mr. Russell, a scientific gentleman, and a Fellow of the Royal Society of the Northern Metropolis, as well as the president of some other institutions, had been examined. After a great deal of examination, all the witnesses had agreed that the invention was, in the improvement on his mind was that a person thoroughly acquainted with the principles of the construction of a heating surface, might, on reading the specification of the plaintiff, be able to construct an apparatus for heating air, and after a great deal of evidence and consideration might be likely to adopt an apparatus like that invented by the plaintiff. Now, something like this is the fact, the argument says, it did come extremely within the scope laid down by Lord Tenterden, that "any extent of specification which could be possible the labour and expense of trials and experiments was undeniably lost."

[illegible]

Baron Parker said this was one of the inconveniences arising from a departure from the rules of the common law courts; but the legislature never could have intended to give the witness the right of reply, where no evidence was called by the other side. He did not think the objection could be made use of, if but one witness was called. It would be better to have them read.—The learned counsel said, and the objections were then read; after which

Baron Parker proceeded to sum up the evidence. He said the patent appeared to have been originally granted to Mr. Neilson alone, but had been subsequently assigned by him to two other gentlemen, who were now plaintiffs with him in this action. The declaration stated that there was a proviso in the patent that it should particularly describe the nature of the invention, and that the latter stood seven or eight years ago in the hands of the defendants, who were charged with the plea that they were not guilty of the infringement, but by the Act of Parliament to which reference had been just made by Sir William Follett, the defendants were called upon to specify their objections to the patent and specification, and the jury were bound to deal with these objections singly. He the learned judge, would express his opinion on the law of the case, and it would be for the jury to deal with the matters of fact. The first objection was, that the defendants were not guilty of the infringement; secondly, that Mr. Neilson was not the original discoverer of this invention; thirdly, that it was not a new invention; and fourthly, that the plea was not true. He said that if the first objection was known before, fourthly, that the specification was in a certain form which did not truly and accurately describe the nature of the invention, so as to satisfy the proviso on which the letters patent were granted; and fifthly, that the invention so specified had not been of any public use or benefit whatever. There was no question in this case but that the invention of the hot blast as now used was highly valuable to the arts, and that the plaintiff

and either invented it or had led to its discovery. There was no doubt or difficulty whatever as to the mode in which these patent rights were to be disposed of. During the previous twenty or thirty years it had been very much the practice with judges and juries to destroy patent rights where technical objections were urged against the terms of the specification; but, within the last ten years, the courts had not been so strict in entertaining objections on these grounds, but endeavored to hold a fair and equal hand between the patentee and the public.

The best mode of dipping of this case would be to take the objections in the order in which they arose. In the first place, then, let them examine whether there had been any infringement of the patent, and be apprehended that there could be no doubt there had, if the specification was free from the objections taken to it. Unquestionably, what the defendants had done was a great improvement on the original invention, but that did not render it the less an infringement. The second objection was, that the patentee was not the true and first inventor of a mode of applying hot air. Now, it appeared, upon the evidence, that some of the witnesses for the plaintiff were aware of any invention similar to this, although it appeared that Mr. Beffield had taken out a patent for a discovery in the manufacture of glass, but that it was totally different, and did not apply in the present case. The next point which the counsel stated, was, that it was important to ascertains the date when the invention was made, and it would be necessary for him to draw the attention of the jury to this part of the case particularly. It was contended by the Attorney-General, that the title of the patent rendered it void, because no one would know from it that it was applicable to the purposes to which the apparatus now complained of was applied. His (the Judge's) opinion at present was, that the title of the patent was not defective, and it did not appear to him that the generality of the title would make it bad, and there was no evidence in the case to show that it was not the pa-

patentee's own disclaimer. As regarded the specification, there could be no doubt that a person was bound to express in clear and distinct terms the nature and application of his invention and discovery, according to the provision in his patent. His impression of the meaning of the patent, the specification which related to this invention, and the nature of the invention itself, were all in his mind, and in that of any assayer, providing it was a close vessel, and placed between the blowing apparatus and the fire, forge, or furnace. But when the patentee stated that the form or shape of the vessel was immaterial to the effect required to be produced, he (the Judge) considered that statement an incorrect and untrue one; and, being untrue, it vitiated the specification, and consequently the patent could not be valid. Nevertheless, he would leave the question to the jury, but he feared that they could not allow competent and skilful persons to correct the mistake in the specification. It might be said that the effect might be produced by the use of any vessel, but the amount of effect depended entirely on the size of the vessel; and, in his opinion, was a great defect in the patent, and formed a fatal objection to the specification. It was also contended that the patent was void, because the mode of constructing the vessel was not clearly pointed out. The patentee, however, admitted the invention of the mode of heating the blast in a vessel exposed to heat, and the specification stated that a person of competent knowledge and ordinary skill could construct a vessel of any size, and of any shape, by the use of iron, or first it could apply the patentee had supposed that in order to be successful blast-furnaces, it was only necessary to increase the size. Now, if the jury were of opinion a person of ordinary skill would adopt this mode by merely looking at the specification, then the specification, as regarded this question, was good, and the objection must fail. They had the evidence certainly before them of two per-

showing a square hole although they had the evidence of several eminent men to the effect that it would not answer. One of the gentlemen examined had told them that in order to adapt the machine to the use of the ordinary water supply it was necessary to introduce a different kind of turbine, as the turbine ordinarily used were liable to clog. Now, the specification omitted to mention water turbines or other propellers, and if it was the opinion of the jury that those turbines were necessary, then the specification was void, and the objection was a good one. The first witness was Mr. Russell, who was a scientific gentleman, and he said that a petroleum person, such as he would select, would be able under the patent to make an efficient apparatus, but the phrase "scientific person, such as he would select," implied that it required something more than ordinary skill. The last witness, Mr. Cooper, admitted the necessity of the improvement, but he was brought in to testify that it was not a new invention, and he also stated that a man might be required to make many experiments before he could bring the apparatus to its present state of completeness. If the jury were of opinion that a man of ordinary skill would be enabled under the patent to construct a valuable apparatus, the specification would not be inadmissible. Sir William Follett contended that the point, as regarded the use and mode of use of coal to be used, was not contained in the objections furnished by the plaintiffs by the defendants, and it could not therefore be entertained. He then gave evidence in support of his contention. Sir William Follett also contended that the defendants differed in opinion from Sir William Follett. He contended that

After a short consultation, the foreman told the jury he had no doubt about that. Byron Fiske said he thought they could not. The next question was, did they think that a man of common understanding and ordinary skill, and possessing a knowledge of the old blowing apparatus, would be able to construct an apparatus capable of blowing out candles at such a distance as would cause death or serious injury? They were asked to answer yes or no.

The jury replied that they were of opinion that a person of ordinary ability, and acquainted with the ordinary blowing machinery, would be able to construct an explosive apparatus under the specification.

His lordship said, the next question was, whether they believed that a person of ordinary skill, and acquainted with the art of blowing apparatus, would correct the errors of the specification, and make the most effectual use of the materials which are mentioned to be essential to the effect required to be produced?—The jury answered, that a person would, in their opinion, correct the errors, and would not be misled by the inaccurate description of the specifications.

MR W. FULFERT objected to the minute recorded by the learned judge. The words "inaccuracy" was not applicable, as no inaccuracy had been proved.

Baron PARKE said, nothing could be plainer than the inaccuracy of description. The description stated that the form and size of the vessel were not material to the effect to be produced, and the jury returned a verdict that they considered both material. For his own part, he had no doubt that the inventor had no idea whatever, when he filed his specification, of the materiality of the form and extent of the vessel. He had that opinion from the evidence.

The jury next found that Mr. Neilson was the first and true inventor. Thus finding for the plaintiffs on the four principal issues, which would have the effect of establishing his right to the patent, but finding for the defendant, by the direction of the learned judge, on the point regarding the variance in the specification, with leave to the plaintiffs' counsel to move the court above to have a verdict entered for the plaintiff.

**PARKS & THE COMPANY.**—In this case Mr. Serjeant Ludlow and Mr. Gurney appeared for the plaintiff, and Mr. Platt and Mr. Whateley re-

sented the defendants. It appeared that the plaintiff, who had been employed by the Great Western Railway Company to execute part of the works along the line of the railway, had entered into a contract with them prior to the 8th of July last year, for the excavation and preparation of ballast for the surface of the railway, which he was to dig from the quarry at Hardwell, near Compton, in the Shrivensham district, and convey it thence to the place where it was to be stacked, a distance of about two miles. The chalkstone which was furnished in pursuance of this contract not being exactly suited to the purpose for which it was intended, the company made another contract with the plaintiff on the 8th of July, according to the terms of which he was to be paid 3s. 9d. instead of 3s. 5d. per yard for the ballast, he providing 800 yards of ballast per week, and screening the ballast to the satisfaction of the engineer. The defence was, that the ballast was not screened properly.—The jury, however, found a verdict for the plaintiff for the full amount claimed—viz., 67*l.* 18*s.*

Richard Farger Emmerson, gent., 39, Manor-place, Walworth, Surrey, for improvements in applying a coating to the surfaces of iron pipes and tubes, May 3.—This invention relates to the coating of the surfaces of iron and cast-iron tubes with tin, or an alloy of tin.

The surfaces of the tube to be coated are first cleaned by immersing them in suitable pickling liquor, composed of two parts of muriatic acid to three parts of clear water, allowing the tubes to remain in it till the scale comes off easily by scouring with sand. The surfaces of the tubes being thus cleaned, they are in a condition to undergo the next process, which consists in immersing them in a bath composed of muriatic acid and zinc or spelter, in the proportion of three ounces of zinc to each pint of muriatic acid; the tubes remain in this bath only as long as will ensure its acting on them both inside and out. The tubes are next to have a quantity of powdered resin placed within them, and dusted over their external surfaces, so as to cover both surfaces as completely as possible. The tubes are now passed into a vessel containing tin, or an alloy of tin, in a melted state, conducting the tubes end forwards through the melted metal, so as to obtain a current of the metal through them, by which means the tubes so treated will be coated with tin, or its alloy. The surfaces of the tubes are wiped with tow, on being removed from the melted tin.—Claim.—The coating of the surfaces of iron and cast-iron tubes with tin, or an alloy of tin.

Andrew Karts, manufacturing chemist, Liverpool, for a certain improvement or certain improvements in the construction of furnaces, May 5.—The object of these improvements in furnaces is to consume the smoke, and thereby economise the fuel.—*Claim.*—The peculiar positions of the fire-bars, particularly their rising obliquely from the fire door towards the bridge of the furnace, together with the hollow bearers underneath them, by which the heated air is distributed through the various air-passages in the furnace, and is caused to impinge upon the smoke over the fire-bed in an unlimited number of currents, passing through suitable apertures constructed in the furnace or fire-places in front of the bridge; and also the air-passage formed in the bridge behind the fire-bed, in furnaces constructed for marine purposes, or in such situations where a sufficient quantity of heated air cannot be introduced over the fire-bed.

The grate or fire-bed of the furnace consists of three distinct sets of fire-bars, joined together so as to form the grate; the first set inclines obliquely downwards from the entrance or fire-door towards the bridge of the furnace; the second set is perfectly horizontal; and the third set inclines obliquely upwards from thence towards the bridge—thus forming a hollow fire-bed or grate, having a sufficient depth in the middle for the ordinary heating purposes of the furnace.

The fire-bars are supported by transverse hollow iron bearers, which have a slot in their undersides open to the ash-pit, and are connected at each end to air-passages in the walls of the furnace, that terminate in suitable apertures above the fire-bed in front of the bridge. The air from the ash-pit enters the hollow bearers through the slots, and, becoming heated, rushes through the air-passages and apertures before mentioned into the furnace, when it impinges upon the smoke, and effects its combustion.

In those situations where a sufficient quantity of heated air cannot be introduced over the fire-bed, an air-passage is formed in the bridge, across its whole width, communicating with the hollow bearers, by which means an additional quantity of heated air is obtained to act upon the smoke.

LEWISIP, APRIL 18.—The meeting of our Polytechnic Society was rendered peculiarly interesting by a lecture given by Herr Störer, on his experiments in the application of electro-magnetism as a motive power. Herr Störer commenced his experiments several years ago, before Wagner's invention, and has proceeded independent of it. By merely following up and carrying out the ideas of Jacobi, to whom the first merit of the discovery is due, he has succeeded in constructing a small machine, the power of which as yet limited to the raising of only a moderate weight, and putting a turning-lathe in motion, but which is nevertheless sufficient to render perfectly evident the whole mechanism of the important invention, and which, as the constructor observed, needs only to be enlarged to produce more practical effects. The principle of electro-galvanic movement has its source, as is well known, in the law of reciprocal attraction and repulsion of two iron bars, surrounded by a galvanic current, alternating with positive and negative electricity, and thereby magnetised. Herr Störer's machine consists at present of only two concentric circles of spiral iron bars, surrounded by conducting wires for the reception of the electric current. Each circle contains three single bars, placed at the distance of from two and a half to three inches from each other, the bars of the outer circle being about half an inch separated from those of the inner. The outer circle is fixed; the inner forms the periphery of a movable disc, swinging wheel, or platoon. This mechanism is brought into connection by two conducting wires with a galvanic battery, in such a manner that in the first place the bars of the one circle with positive electricity surround those of the other with negative electricity; then suddenly, by an arrangement in the conducting apparatus, the current is changed, and thereby electricity of the like name is produced in both circles. The consequence of this operation is, that the opposite bars, in consequence of the different magnetic power communicated to them, first attract each other, then instantly becoming, by the inversion of their poles, similar magnets with equal force, repel each other. By this regularly repeated alternation of attraction and repulsion, each bar of the internal movable circle is successively drawn towards all the bars of the external fixed circle, and then given as it were back on the next, whereby the whole disc is brought into state of uniform motion.

The inventor makes very moderate estimates of the cost of the machine. The expense is chiefly in the wear of the zinc in the galvanic battery by the action of the acid; but as to the outlay for this article, it will be almost entirely counterbalanced by the precipitate, which, in consequence of the operation, is raised in the acid, and which yields a somewhat chemical product. With regard to the power of the machine, and the possibility of reinforcing it so as to produce greater practical effects, Herr Störz submits the following considerations:—"The present machine, though only double the size of the one first constructed, which had six pair of bars, acts with a sixfold increase of force. Each galvanic element consists of a copper cylinder, a zinc cylinder within it, and a chemical mixture by which they are connected. Now, respects the effect of the number of elements employed, Herr Störz makes the following observations, the accuracy of which he has proved by experiments:—"In the connection with a single element the machine raises, with moderate velocity, 3 lb.; with two elements, 15 lb.; with three, 25 lb.; with six, 40 lb. This is approximately an ascending gradation of power in the ratio of 1, 4, 9, 16, whence it certainly would appear that the force might be found to augment exactly in the relation of a progressive increase of elements." According to Herr Störz's calculations, the connection of a battery of fifty elements, with a machine in cubical contents, twenty-six times water than the one exhibited, would produce an effect equivalent to 50-horse power. Still, however, after all these data and calculations, there still exist several doubts as to the practicability of the application of this invention to machinery on an extensive scale. On the other hand, the results obtained by the experiments hitherto made are of sufficient importance to encourage a spirited prosecution of the discovery, which is in itself an indication, that it ought to be joyfully hailed by all who take an interest in the progress of civilization, as a new triumph of the human mind over insuperable difficulties. At all events, we Germans have just reason to be proud of an invention the first idea of which came from a German, and all the improvements it made in which are the offspring of German intellect and German perseverance.



## MINING CORRESPONDENCE.

## FOREIGN MINES.

## BOLANOS MINING COMPANY.

**March 6.**—*Revelant's Level, north of Las Animas mine.*—This level has been driven 534 varas north of the mine, for the purpose of exploring the vein about midway between the levels of Esperanza and Santo Tomas, as in the former old workings were seen extending below, which were reported to have been producing good azogue ores at the time that they were abandoned, but the Santo Tomas level, which has since been driven by the company from Conjera to Cocina, on the same part of the vein, and found poor, proved that the ore did not extend in depth to that level. In the progress of Revelant's level ore ground, of about thirty varas extent, has been passed through, and produce from the driving 500 cgs. 5 ars. The ventilation has for some time past been bad, and prevented our putting barreters to work on cargo; but, during the present week, a communication has been made to Cocina shaft, by means of a winze sunk below, at fifty-three varas north of Las Animas, and a free circulation of air produced, which will enable us to open two or three new labores. The ore from this place is chiefly azogue, containing from 12 oz. to 2 mcs. per carga.

**San José Shaft.**—It need scarcely be said, that the continuation of this work has for its object the draining of the deeper workings, and enabling us to explore and examine the vein at greater depths as the sinking proceeds. The bottom cross-cut, which is about 240 varas from the surface, has not yet cut through the whole body of the vein, and the richness or poverty of the lode cannot be ascertained until this is effected; if it be found rich, the sinking of the shaft would, of course, be absolutely necessary, to continue the extraction below—and if poor, it is an important and desirable work, as affording the only means of examining the vein at a satisfactory depth below, and ascertaining if a favourable change may have taken place; and it may be here remarked, that the bumpy nature of the vein renders this not by any means an improbable circumstance; the ground in the shaft is favourable for sinking, and we have all the necessary materials, such as pumps, rods, &c., for completing it to a sufficient depth for a new cross-cut—say from twenty-four to twenty-six varas below San Lorenzo level.

**San Lorenzo Cross-cut.**—This level is at present cross-cutting the vein, which is altogether about six varas wide—two varas of it has been already penetrated, and has produced a few bags of ore. The San Miguel winze, sinking below Taylor's level, and situated nearly opposite the cross-cut, has reached a depth little short of the latter; and as it is also poor, we cannot expect to find the vein very productive at this point, but in its progress south we may expect an improvement, as the vein in the bottom of San Antonio and Santa Barbara winzes is large, and contains ore, averaging from a half to three-quarters vara wide.

**Taylor's Level, north of San José Cross-cut.**—This level has been extended about eighty-five varas from the cross-cut, and nearly the whole distance has been on an unproductive vein, although occasionally presenting promising appearances; the last twenty-five varas have shown a slight improvement, having produced twenty-three cargas of ore. In the Santo Tomas level, between Conjera and Cocina shafts, there are one or two points where a little ore was discovered, during the progress of that work, in the bottom of the level, but in such small quantities, that it cannot be profitably worked; if, however, the driving of the level (Taylor's) be continued, it will soon become necessary to commence a winze below Santo Tomas, for the purpose of affording ventilation, as the end is already very hot and close.

**Taylor's Level, south of San Nicolás.**—This level, from San Nicolás winze, has been driven entirely on the Jabonilla, or upper part of the vein, leaving the main body untouched against the footwall. One reason for driving on the Jabonilla was to accelerate the progress of the work, which would otherwise have been very tedious and expensive, from the excessive hardness of the vein; another reason was that of being enabled to examine quickly the vein below the winzes of San Rodrigo and Santa Prisca, for which latter purpose we are at present driving a cross-cut east, at fifty-three varas south of San Nicolás winze; this cross-cut has already been driven about two and a half varas, producing three and a half cargas of ore—showing that thus far the vein has been rather unproductive; it is, however, at this place, upwards of six varas wide, and we know that the part on the footwall, which has yet to be explored, has been in the upper workings the most productive.

**San Miguel Winze.**—This winze has now reached nearly thirty-one varas below Taylor's level, which is sunk on the footwall of the vein. It was at first commenced for the purpose of raising ore, and the situation was chosen to make the most speedy communication with San Lorenzo cross-cut. The first twenty-five varas produced 693 cargas of ore, whereas the last six varas have produced none; the communication above alluded to, between this and San Lorenzo cross-cut, we expect to complete in about three or four weeks.

**Santa Brígida Winze.**—The situation of this winze was chosen from its being nearly in the centre of the Old Barranco planes, and also from the circumstance of the drainage being effected by means of machinery connected with San José engine—it has been for its whole depth (about seventeen varas) uniformly poor; during the present week, however, some signs of a favourable change have appeared, and a quintal or so, of a promising kind of azogue, has been produced from the winze.

**San Martín Level.**—South of San Rodrigo has now been driven about fourteen varas, having produced 318 cargas of ore. The same level driving north of Santa Febrina is poor, but a part of the vein still remains to be examined above the footwall; the communication between this and the last-mentioned part will, probably, be effected in the course of five or six weeks, and as the part between Santa Febrina and Volapie is already complete, we shall then be able to convey the water through this level instead of San Francisco, to which at present we are obliged to raise it by ponies, and, at the same time, will enable us to extract any ore which may be found between the before-mentioned levels, and also to commence new winzes below this level, the situation of which will be determined upon by the most promising parts of the vein. The same level, south of Volapie, is passing through a singular kind of vein, composed chiefly of a soft kind of jabonilla, with hard rounded stones of good ore, varying much in size. During the month of February, of the five varas driven, about two varas produced 170 cargas of ore; this, however, deteriorated almost as suddenly as it first appeared, tending much to show the irregular and bumpy nature of the vein; this level is now driving as quickly as possible, for the purpose of communicating with the San Diego shaft and the Góteras planes, through which we shall then be able to convey the water, and thus put these labores in a favourable state for carrying on the works.

**San Rodrigo Winze** is sinking below the San Martín level, on the footwall of the vein, and has produced in the six varas which it extends below that level, 627 cargas of ore. The bottom of the winze is at present not so productive, although the ore is still about one and a quarter vara wide, but more mixed with blende and tetraite.

**San Prisca Winze** is situated nearly opposite San Rodrigo winze, on the upper part of the vein, which at the commencement presented very promising appearances, and produced about twenty-four cargas of ore in less than six varas, but at that depth it became poor, and the sinking has been suspended.

**San Diego Shaft.**—We have not yet been able to commence the sinking of this shaft below San Tomas level, owing to several parts above requiring repairs; these are, however, nearly concluded, and in the course of eight or ten days we shall, I expect, be ready to go on with the sinking. The shaft requires to be sunk about four varas perpendicular to communicate with Góteras winze, after which we propose to continue the shaft on the underlie in the direction of the vein.

**Góteras Winze** is now twenty-five and a half varas below Santo Tomas level, and the twenty-three varas sunk by the company have produced 543 cargas of ore, which has uniformly contained a good ley, varying from three to five mcs. per carga—and within the last two or three months the vein has somewhat improved. A new level, called the Artesonera, was, therefore, commenced driving south of the winze, which, up to the end of last month, has been extended 7-18 varas, and produced 313 cgs. 3 ars. of good azogue and lead ore. The ground, however, both in the bottom of the winze and in this level, is very hard; and although we have at present four ponies by day and four by night in different points of the southern end of the winze, we cannot succeed in materially increasing the quantity of ore raised, which at present does not exceed twenty cargas per week.

**Santa Tomas Level,** driving south of Góteras, continues in a large and rather promising vein, although the ore raised is not of much importance either as respects quality or quantity; but observing the improvement of the vein in Góteras winze, at Artesonera level, I think it desirable to sink a winze below Santa Tomas level, as soon as it reaches the distance of twenty varas from the winze. The produce of ore for the month, as seen by the network list, amounted to 26734 cargas, of which 2136 cargas were azogue ores, containing, per assay, an average ley of 2 mcs. 25 cs. per carga; for the month of March we may calculate upon the produce continuing at the same rate, or about 700 cargas per week.

[The report from the branch mines will be published next week.]

## REAL DEL MONTE MINING COMPANY.

## Mines Report.

**Mineral del Monte, March 23.**—In Santa Barbara winze, clearing and securing below the adit, 190 varas east of San Ramón shaft, we are going on favourably since the air-pipes, &c., have been put in, and may expect to communicate with the Serrano level in the course of a week. In driving east of cross-cut south, thirty-six varas west of the diagonal shaft, at the Santiago level, the lode has now turned a great deal to the south of the direction in which we first met it, and appears as if it will come out and join the old level; the part we are now driving is from one and a half to two varas wide, containing azogue ore. Barreters are employed in stepping east and west of the San Juan level, where the lode is large, with azogue and smelting ore. We have commenced driving with two men only,

east of cross-cut south, seventy varas east of Dolores shaft, at the adit level on a vein that underlies north, in hopes of cutting the Santa Brígida vein; the ground is favourable for driving; the vein is chiefly azogue and quartz, with spots of blende. We have resumed in the past week the driving the adit west from San Pedro cross-cut south 130 varas, west of San Cayetano shaft; there is now about thirteen varas more to drive to communicate with the level east of Dolores cross-cut, thirty varas west of Santa Teresa shaft, which I hope will be done in two months. We have only two men employed in each end. At Terreros the company have been employed for the past week in putting in bearers, cisterns, and an 8-inch plunger-lift, at the Esperanza, or 118 vara level, to force the stream of water coming from the level west to San Cayetano shaft, where we have put in a 6-inch plunger-lift to the new engines. At the San Pedro, or 107 vara level, to leave the water to add, we have put in the Esperanza level, from Terreros shaft, about 195 varas of 5 and 6-inch pumps, to carry the water over a piece of high ground forty varas east of Santa Teresa shaft, and from there have put launders in the San Pedro level, to convey the water to San Cayetano. In consequence of the bursting of the water from the Esperanza level, west of Guadalupe shaft, on the 24 inst., nothing has been done in sinking Terreros shaft, driving the Socorro east, or the level west of Serrero winze, for the month, and for the week past we have been hindered in La Crisotoma and San Andrea winzes, below San Felipe level, but hope now to go on regularly in these places, as the Terreros engine will be greatly relieved by the water going to San Cayetano. In San Crisotoma winze there is azogue and smelting ore, and azogue ore in San Andrea winze. In the stopes, east of San Pedro winze, seven varas below La Cruz level, there is azogue, with a little smelting ore. In the level driving west of San Joaquín winze, thirteen varas below San Miguel level, there is some azogue ore, but at present is not so good as it was in the beginning of the month; there is also some azogue ore in the level east of San Miguel winze, about eight varas below La Cruz level, with favourable ground for driving. We have suspended the San Miguel and La Cruz levels, west of Terreros, for fear of meeting more water. In the level driving east of winze, ten varas below the sixty-eight vara level, eighty-four varas east of Terreros shaft, on the Japona vein, there is azogue ore; the lode is 15 vara wide. In the winze below the adit, and adit west of Guadalupe shaft, the air is so bad that we could not go into the end for the past week. We have now altered the pipes, and hope in the present week to clear south under the San Francisco shaft, as we can again go into the end. In San Francisco shaft little has been done in clearing for the month, in consequence of the bad air. We have now put in an 18-inch cylinder, to force air, working double by horses, and to-day are again working in the bottom of the shaft, and, if we can go on regularly, we hope to communicate with the adit in about two months. In the adit driving east, in Santa Ynes, 310 varas north of the Biscuina vein, to cut the part of the vein that San Vicente shaft is coming down on, we are going on regularly, but as yet have not met the vein. Destajeros are employed in stepping north and south of rise 240 varas north of the Biscuina, on the Santa Ynes vein, about twenty-six varas above the adit, where there is some azogue and favourable ground. There is also azogue ore in the level south of winze, twelve varas below the 182 vara level, at seventy varas south of San Vicente shaft. In San Vicente shaft, sinking below the 212 vara level, on the Santa Ynes vein, the lode is about 14 vara wide, with moderate ground, but poor.

In the twenty-five vara level, south of cross-cut, on the Santa Brígida vein (El Sacramento), the lode is at present small, but there is still a piece standing on the east side, which will be taken down as soon as convenient, to prove that part of the vein. In the same level, north of cross-cut, the ground is favourable; the lode one and a half vara in width, with some azogue ore. In the stopes north of San Felipe winze, above the twenty-five vara level, south of El Sacramento shaft, the lode is about one vara wide, with azogue ore and favourable ground. Since the communication of San Miguel winze, north of El Sacramento, from the adit to the twenty-five vara level, we have put destajeros to step south from the back of the level. The ground is favourable, lode one vara wide, with azogue and some smelting ore. We have also commenced a winze below the twenty-five vara level, six and a half varas north of cross-cut, at El Sacramento; the ground is favourable, but finding the vein poor in the bottom, we have put a solar in the winze, and have commenced to step north; the vein is three-fourths of a vara wide, with azogue ore. Having finished the dividing of El Sacramento shaft, from surface to forty varas below the adit, on the 15th inst., we have commenced a new cross-cut at forty-five varas under the adit, to cut the Santa Brígida vein; the ground is at present hard. We are driving east on a branch from the cross-cut south, at the adit level, going from Acosta to San Pedro shaft for a side adit; the object in driving here is to cut off a piece of the old adit, east of Acosta shaft, which is in a very bad state, and requires a great quantity of timber to keep it open to make room for the launders, which must be put in to carry the water back from San Pedro shaft. We have been making an alteration in the pressure-engine at La Virgen shaft, and hope, in the course of a week, to put the new engine to work. We have resumed the driving the Aviadero adit, south of the Bello vein, the Guerrero adit, south of adit shaft, where the ground in the Guerrero adit is moderate.

Net cost for January . . . . . \$65,444 7½

Returns for ditto . . . . . 61,626 3½

Loss . . . . . \$3,818 4

[Two other important letters, for which we have not room, shall appear next week.]

## ENGLISH MINES.

## HOLMSTON MINING COMPANY.

**May 17.**—I beg leave to inform you, that, in driving the 110 fathom level south, the ground is very hard. In the 100 fathom level west the lode is still a rich course of ore, eighteen inches wide, and worth about 35l. per fathom. The lode in the stopes, in the back of this level, is sixteen inches wide, and worth 26l. per fathom. In the seventy fathom level west the lode is fourteen inches wide, and worth about 12l. per fathom. The rise in the back of the eighty fathom level being still in the large cross-course, the ground continues hard, and progress at present slow. In driving this level east, the lode continues about two feet wide, chiefly composed of maulie, spar, and capel. The lode in the eastern stopes, in back of the eighty fathom level, is sixteen inches wide, and worth 24l. per fathom. The lode in the western stopes, in back of ditto, is still about eighteen inches wide, and worth 26l. per fathom. In the seventy fathom level eastern stopes the lode is fifteen inches wide, and worth 24l. per fathom. The lode in the western stopes, in back of ditto, is one foot wide, and worth 17l. per fathom. The Flag-jack lode, in the seventy fathom level, east of Wall's shaft, has been driven into about three feet, but we are not as yet through it; the lode is apparently very large, and composed chiefly of maulie, spar, and capel, intermixed with a small proportion of copper ore. The cross-cut to Hitchins' shaft, at the sixty fathom level, and rise in back of ditto, against Bray's shaft, are still in moderate ground. The tribute pitches are, upon the whole, looking favourable.

F. PHILLIPS.

## TREVILLO MINING COMPANY.

**May 17.**—The lode in the engine-shaft is about two and a half feet wide, producing ore in good ground—very kindly. The lode in the forty fathom level, west of engine-shaft, is ten inches wide, tribute ground. The lode in the forty fathom level, east of engine-shaft, is fifteen inches wide, tribute ground. The lode in the rise, in the back of this level, is ten inches wide, tribute ground. The lode in the thirty fathom level, east of Williams' shaft, is nine inches wide, tribute ground. The lode in the rise, in the back of this level, is fifteen inches wide, good tribute ground. The lode in the rise, in the back of the twenty fathom level, east of Williams' shaft, is six inches wide, good tribute ground. The lode in the ten fathom level, east of Williams' shaft, is six inches wide, good tribute ground. We have sampled to-day 303 tons of ore.

H. WILLIAMS, J. MORSON.

## REEDWOOD CONSOLIDATED MINING COMPANY.

**May 17.**—In sinking the north engine-shaft we are still passing through a course of very hard ground; our progress, of course, is comparatively slow. We are now about a fm. 3 ft. below the fifty fathom level, the ground is favourable; we have driven about nine fathoms from the shaft. At the forty fathom level going east, on the south lode, the lode is from twelve to fifteen inches in width, but unproductive. Driving west, on the north lode, at the thirty fathom level, the lode is 2 ft. 6 in. wide, producing capel, maulie, spar, and good stones of copper ore; this lode has still a very favourable appearance. Going south, at this level, on the silver-lead lode, we observe an improvement in the past week; the ground is easier, and the lode is about eight inches wide, producing some good work for silver-lead ore. We do not observe much improvement in the tribute pitches, the men, however, are working steadily. The ground is not altogether as favourable in the cross-cut at Hazi Down. We have driven about twenty-two fathoms north of the white shaft.

F. R. ROWE.

## TINCHY MINING COMPANY.

**May 18.**—I beg to hand you my report of the state of this mine. We have commenced driving east, at the 103 fathom level, and find the lode very large—two feet wide, and good work for tin. The 142 east and west conditions about the same as for some time past. The lode in the 130 east condition about five feet wide, two feet good work for tin and copper ore. The lode in the winze, sinking under the 110, has improved for tin and copper ore since my last; it is now worth from 26l. to 40l. per fathom. The 160 east is producing good work for tin—worth from 12l. to 15l. per fathom. The ninety and has very much improved for tin since my last; the lode is now eight feet wide, and worth 26l. per fathom. The eighty-two and continues much the same—worth about 26l. per fathom. The seventy-two is looking well for tin and copper ore—worth from 26l. to 30l. per fathom. One tribute department, on the whole, is looking well, and we are getting on in all our operations very satisfactorily.

W. PAUL.

## WHEAL LEBDS MINING COMPANY.

**May 15.**—The Righty Fathom Level East—Lode two feet wide, with a branch of ore on south side four inches wide. Sixty Fathom Level East—No lode taken down. Stopes in Bottom of Sixty Fathom Level East—Lode fifteen inches wide, producing one ton and a half of ore per fathom. Winze in Bottom of Fifty Fathom Level East—Lode eight inches wide, very good ore. Fifty Fathom Level East—Lode six inches wide, good ore. Cross-cut at Forty Fathom Level East—Much the same as last week. The tributers are working well.

C. H. RICHARDS.

## TRENTHAM CONSOLS MINING COMPANY.

**May 15.**—The seventy, east from Christie, continues three to four feet wide, and worth 26l. per fathom; the ore is of better quality, and more free from junk than we have seen it in the levels above. We have not yet got the lode in driving this level west. The sixty fathom level is looking well, the lode four feet wide, worth 31. to 10l. per fathom. The fifty west is worth 31. per fathom, and this level east is looking better, the lode being worth 31. per fathom. In Good Fortune shaft the lode has not been broken since survey day. The thirty-four fathom level is poor, but the twenty is greatly improved, being three feet wide, with a leader of ore worth 6l. per fathom.

W. SINCOCK.

## TAMAR SILVER-LEAD MINING COMPANY.

**May 17.**—I beg to acquaint you that our mine is, on the whole, looking favourable. The ninety-five fathom level is particularly good; the lode here is large, and producing rich work—the other levels are much the same as stated in the report of last week. In the tribute department there are several pitches somewhat improved since the beginning of the month; those workings at the 105, 95, and 43 fathom levels, are looking well, and the men are likely to be well paid for their labour, and we have no doubt but we shall have a tolerably good sampling, though we cannot at present say the quantity.

MARK JAMES.

## GREAT WHEAL CHARLOTTE MINING COMPANY.

**May 12.**—The lode in the eighty-two fathom level west is two feet wide, producing some stones of ore. The same level driving east is still poor. The lode in the seventy-two fathom level west from engine-shaft is about seven feet wide, and worth 26l. per fathom. The stopes in the back of this level, east from Williams' winze, is worth 30l. per fathom; and the stopes, west from Jenkins' winze, in the back of this level, are worth from 26l. to 30l. per fathom; there are also stopes east and west from Luke's winze, in the back of this level, east from engine-shaft, worth about 10l. per fathom each. The stopes in the bottom of the sixty-two fathom level, west from engine-shaft, are worth about 15l. per fathom. We are obliged to stop the winze that was sinking under the sixty-two fathom level, west from shaft, for the present, as it is down to water. Other places much as last reported.

## UNITED MILLER MINING COMPANY.

**May 19.**—Adit End East—In this end the lode is 3 ft. 6 in. wide, with stones of ore. Adit End West—Lode two feet wide, producing a small quantity of ore. Ten Fathom Level—Lode two feet six inches wide, chiefly maulie. Twenty Fathom Level—There has been nothing done for the past week, the men have been employed in sinking the eastern shaft, which we hope to communicate to the fifty fathom level in the course of a week or ten days. Thirty Fathom Level—Lode 2 ft. 6 in. wide—1 ft. 6 in. ore of a fair quality. Forty Fathom Level—Lode 2 ft. 6 in. wide—one foot on the north part good ore. Fifty Fathom Level—Lode 3 ft. 6 in. wide—orey throughout, with a promising appearance. Fifty Fathom Level—In the eastern end the lode is two feet wide, producing some ore, but coarse in quality. Western end, lode three feet wide, ore throughout, of fair quality. Sixty Fathom Level—Western end, lode three feet wide, producing some ore of a kindly appearance. Eastern end, lode 3 ft. 6 in. wide—two feet on the south part producing good ore, but much intersected with maulie. Williams' Shaft—No lode broken in this shaft for the past week.

C. PENROSE.

## WEST WHEAL JEWEL MINING ASSOCIATION.

**May 17.**—The ground in Buckingham's engine-shaft is a little more favourable than last reported. The fifty-seven east, on Wheal Jewel lode, will produce two to three tons per fathom, worth 10l. per ton. In the fifty-seven east, on the south branch, the lode is fifteen inches wide, more spar in the lode than last reported, worth 5l. per fathom. In the forty-two fathom level we have cut Wheal Jewel lode on the eastern side of the little cross-course, and find it eighteen inches wide, containing good stones of ore. The Forty West, on Wheal Jewel Lode—Lode fifteen inches wide, containing good stones of yellow ore. The twelve west, on this lode, is worth 10l. per fathom, and the rise in the back of the adit continues worth 20l. per fathom.

H. LEAN.

## MINING NOTICES.

[Under this head we purpose collecting such paragraphs as may appear in the provincial and other Journals, bearing reference to discoveries and improvements in mining operations at home and abroad. It is hardly necessary to observe, that we must not be considered to admit the correctness of the information conveyed, which, in too many instances, requires cautious investigation—the sanguine expectations of parties in some instances, and the want of honesty in others, throwing a degree of responsibility on a Journal in giving publicity to reports, which we do not intend taking upon ourselves.]

**LANGUEN COAL AND IRON COMPANY.**—We are informed that several valuable veins of coal, of the finest quality, have just been "won," under the direction of Mr. Nixon, at the colliery of Languen, near Nantes, belonging to the Languen Coal and Iron Company, which was formed last year by Mr. Lammie Murray, of London. The coal is said to be admirably suited to making cast-iron of a superior quality, to which use it is to be exclusively devoted by the proprietors, abundance of the richest ore being found in the immediate neighbourhood. The small quantity of coke made iron produced in France, and its very high price, as compared with English iron, renders the success of the undertaking of national importance to this country.—*Galignani's Mes.*

**IRON MINES IN THE HIGHLANDS.**—We understand that that spirited nobleman, the Duke of Richmond, has had a number of workmen employed for some weeks past in the mountains of Strathdown, on an experiment, to try the practicability of working the several minerals discovered there last season. The results were submitted to an eminent chemist, and on analysis gave the most promising result. Should his Grace be successful in working the mines, the employment they would afford would be of the greatest importance in that district of the country, where the crops are so precarious. The long land carriage is the most serious impediment to the successful working.—*Aberdeen Journal.*

**ULVERSTON IRON MINES.**—The Plumpton Iron Ore Company have begun to pump with their steam-engine, which they have lately put down. The old company of Harrison, Ainlie, and Co., are also preparing for placing a steam-engine at their works. We shall soon have four engines at work where we had not one a few years ago.—*Manchester Guardian.*

## MINE ACCIDENTS.

**Clenace Quarry, Clonmac.**—On the 5th inst., whilst a man named Mathew Rodda, was at work in a quarry, at Clonmac, in the parish of Croghan, a quantity of stones fell upon and buried him; on time was lost in clearing the rubbish, but the poor fellow was so dreadfully injured, that he survived but four hours after the accident.

**William Pitt, Whitsharpe.**—On Thursday last, a young man, named John Geayle, lost his life in William Pitt, by the falling in of a part of the roof.

**Afferton, Derbyshire.**—As Henry Bailey was descending an instantaneous pit, in Green-hill-lane, near Afferton, a box fell from the mouth of the pit upon his head, and killed him.

## CARBONATE OF BARYTA.

At a late meeting of the Wernerian Natural History Society, Dr. Traill exhibited specimens of witherite, or carbonate of baryta, from a new locality in Wales, and made remarks on the mine from which it is extracted. This mine is close to the right side of the public road leading from St. Asaph to Holywell, about three miles from the former town, among the clay shales, some of which form the eastern boundary of the fertile valley of Clwyd, and near the junction of the slate with the mountain limestone; it is in the mining district of Rhinall, and the mine where it is chiefly found is named the "Pen-est Mine." The entrance to the veins containing it is by an adit near the road, which serves as a drain to the workings in the upper part of the hill, with an inclination from the upper part to its exit of twenty-five feet. The carbonate is found in veins along the adit, and descending below it, and is mixed with sulphate of baryta and some galena, but the principal product of this part of the workings is the carbonate, which occurs in such quantity as to become an object of mining industry. It is said, like the sulphate of the same earth raised in the upper part of the vale of Clwyd, the Isle of Arran, and Redbreast, for the several purposes of adulterating white paint, and is more difficult of detection than the other adulteration, because it effervesces with, and is soluble in, muriatic or hydrochloric acid. It is also said on a more limited scale for chemical purposes. We have now, then, in Southern Britain, two great localities of carbonate of baryta—Anglesea in Llanabed, Alderney in Guernsey, and Rhinall in Flintshire, or Arskdale, in Yorkshire, Southdown in Hampshire, and Rhinall in Flintshire.

**FALLING STONES.**—M. Charles has made a catalogue of the falling stones recorded in history, from 530 to 1123 (from which it appears, that, during these six centuries, the smallest number fell in November, from which he concludes, that the place of the orbit of these meteors must have undergone considerable change.



**ROSE-DOWN MINING COMPANY.**—Notice is hereby given, that the directors have made a further CALL of FIVE SHILLINGS per share, payable on or before the 24th day of June next, to Messrs. Rosanquet and Co., 73, Lombard-street.  
44, Finsbury-square, May 7.

#### MEETINGS OF SCIENTIFIC BODIES. IN THE ENING WEEK.

SOCIETY.	PLACE OF MEETING.	DAY.	HOUR.
Royal Geographical	21, Regent-street	Monday	8 P.M.
Royal Medical and Chir.	53, Berners-street	Tuesday	8 P.M.
Linnean	Bohn-square	Tuesday	8 P.M.
Civil Engineers	25, Great George-street	Tuesday	8 P.M.
Zoological	28, Leicester-square	Tuesday	8 P.M.
Royal Botanical	49, Pall-mall	Tuesday	8 P.M.
Society of Arts	Adelphi	Wednesday	7 P.M.
Royal	Somerset House	Thursday	8 P.M.
Antiquaries	Somerset House	Thursday	8 P.M.
R. Society of Literature	St. Martin's place	Thursday	4 P.M.
Royal Institution	Albemarle-street	Friday	8 P.M.

#### PUBLIC COMPANIES. MEETINGS.

Wheat Leeds Mining Company	Office, 12, Great St. Helen's	May 25	12.
Rio de Janeiro	19, Bishopsgate-street within	25	12.
Sabin Steam Navigation Company	George and Vulture Tavern	27	12-1.
South Eastern Railway	London Tavern	27	1.
Peninsular and Oriental Steam	51, St. Mary-axe	27	1.
Equitable Gas-light Company	21, John-street, Adelphi	27	12.
St. John del Key Mining Association	8, Tottenham-yard	28	2.
Bolton Mining Association	John-street, Adelphi	28	1.
Port Cavi Iron and Coal Company	44, Finsbury-square	29	1-2.
Real Pier Company	London Tavern	29	2.
Treglin Mining Company	6, St. Mildred's-court	29	1.
East Treadwell Mining Company	6, St. Mildred's-court	31	1.
New Zealand Company	New Zealand-house	31	2.
Hungerford Market Company	Office, Villiers street, Strand	31	1.
Bank of British North America	7, St. Helen's place	June 1	12-1.
Clarence Railway and Dock Company	Town Hall, Stockton	1	11-12.
Regent's Canal Company	City-road Basin	2	2.
United Mills Mining Company	Office	2	1.
Thames and Medway Canal	114, Union-st.	2	2.
Waterloo Bridge Company	Crown and Anchor Tavern	3	12.
Hammermith Bridge Company	Crown and Anchor Tavern	3	1.
British Plate Glass Company	Albion place, Blackfriars	3	11.
Llanelli Railway and Dock Company	London Tavern	7	12-1.
Mexican and South American Co.	9, New Broad-street	9	1.
Grand Junction Water-works	Brook-street, Grosvenor-square	10	12.
Durham County Coal Company	Office, Stockton	15	2.
Colombian Mining Association	Office, Austinfriars	17	2.
New Granada Mining Association	Office, Austinfriars	17	3.

Rio de Janeiro Gold-stream Works	10a, May 27	Stone, Martin, and Co.
Eastern and Georgia Steamship Co.	10a, May 27	Union Bank of London.
Northern and Eastern Railway	10a, May 27	Masterman and Co.
Cambrian Iron and Spelter Co.	24, June 1	London Joint-Stock Bank.
Hartlepool Railway and Dock Co.	24, June 1	Barnett and Co.
Donscombe Mining Company	10a, May 27	18, 26, Birch-lane.
Rose Down Mining Company	10a, May 27	24, Rosanquet and Co.
New Zealand Company	10 per cent.	New Zealand House
Newport Gas Light Company	11 per share	J. Matthews, Newport
Treadwell Mining Company	10a, per share	6, St. Mildred's-court

#### NOTICES TO CORRESPONDENTS.

We were unable to get the section accompanying Mr. Llewellyn's paper engraved in time for our present Number—it shall appear next week.  
Notwithstanding that we have given an extra sheet, we are compelled to postpone the insertion of several papers.  
Mr. Martin's communication, on the Duty of Steam-Engines, has been received. The letter of "C. R. R." received, which shall have immediate attention. One of the parties named, "H. B.," is now in London, and the business shall be facilitated.  
"J. C. R." shall be attended to the first opportunity which presents itself. We have not yet received the opinion on the case submitted to "K. A. T. E."  
"Madoc," "Hamm," and "the Vale," shall receive early acknowledgments of their favours, with explanations of delay in not earlier complying with their wishes.

## THE MINING JOURNAL, Railway and Commercial Gazette.

LONDON, MAY 22, 1841.

The letter of a Correspondent, on the proceedings of the Cambrian Iron and Spelter Company, requires more than a passing remark, the resolution lately arrived at (the object of which was the extension of the capital of the company) having increased the liability of the shareholder from 25*l.* to 35*l.* per share, or, rather, the whole of the capital having been paid up, in accordance with the prospectus of the company, he is then called upon to subscribe 40 per cent. in addition thereto, while he is threatened with legal measures being resorted to for the recovery of the increased capital, or that his shares will be subjected to forfeiture. Thus a shareholder (placing faith in the representations of the directors), holding 100 shares, on which he has paid 2500*l.*, is told, that if he is not willing to advance 1000*l.* more, the capital he has already embarked is sacrificed—or his ruin may be completed by enforcing the payment. We know not what may be the powers vested in the directors by the Deed of Settlement, but it must be admitted that the prospectus, in the absence of a deed (and the prospectus is always first issued), is the basis of the partnership; and although it may be said that a Deed of Settlement will be prepared, to be executed by the shareholders, yet such deed ought to be consonant with the terms of the prospectus. That such is not the case in the present instance, is apparent from the letter of our Correspondent, and the resolutions arrived at by the directors—confirmed, as they are, by a meeting of some seven or eight individuals, of whom four would form a majority, with the vote of the chairman. It is not, if even nine-tenths should subscribe to a resolution, that it should become a law, and binding on the remaining tenth. It is first necessary to see how far the resolution is in accordance with the clauses of the Deed of Settlement and equitable principles, and, in the present instance, we must say, that however the legal enactments of the one may have been consulted, the interests of the proprietors have been sacrificed. We are perfectly aware that, in cases of Joint-Stock Companies, whether for working mines, the making of iron, or constructing railroads, the opinions entertained by the projectors, in most instances, prove to have been too sanguine, and hence the necessity of increasing the capital; but, in the majority, if not all the cases which have come under our notice, with the exception of the Cambrian Iron and Spelter Company, the British Iron Company, and the National Loan Fund Insurance Company, it has never been attempted to increase the liability of the shareholder, or subject his shares to forfeiture after having fulfilled his contract—that of full payment of the calls made on his shares, to the extent of the capital of the company, as originally proposed.

In the case of the British Iron Company we believe that the shares were originally of 100*l.* each, and, by a resolution of the proprietors, reduced to 50*l.*, and since again increased; this involves a legal question, into which we are not prepared to enter. The course which has been almost invariably pursued, is that of raising additional capital, by a further issue of shares, in many instances at a reduced rate—for instance, in Real del Monte, the shares were issued at 10*l.*, ranking of equal value with those on which 500*l.*

had been paid, or in the Bolanos lately noticed in our columns; but in all such cases, the shares so treated are first tendered to the shareholders in proportion to their respective interests in the undertaking. Now, assuming that the entire body possess the means and inclination to advance the further funds necessary, it is merely an additional subscription to the monies already embarked, while in other cases, where there is an inability on the part of the shareholder to subscribe his quota, his responsibility is not increased—his shares are not subjected to forfeiture—his interest being simply diminished, in proportion to the number of shares, at a reduced cost, which may have been allocated to him, but which, from his inability to avail himself of, consequently pass into other hands.

We think, with reference to this particular company, that it behoves some of the principal shareholders to institute an inquiry into the outlay which has already taken place, and, as they are spelter makers, to ascertain the state of the spelter works, the weekly make, and consult the prices of metals. The expenditure has been profuse in some departments, and in others money has been wanting—the omnibus of the directors—the arrangements made for their accommodation—the views entertained in the erection of the iron works, which, we must admit, are well executed (although costly) by Mr. BAUNTON, the company's engineer—who we do not blame for doing his work well, but the directors for their extravagant notions and expenditure, with the neglect in other departments, render it only necessary on the part of the shareholders to pay a visit to the works, and inspect the accounts (if the latter can be arrived at), to satisfy themselves that neither economy nor prudent management has been the order of the day. We have observed, in another place, that a certain "London Joint-Stock Bank" are understood to be largely interested, either as partners, or for advances made—and the more the outlay on the part of the proprietors, of course the greater the security. We can state, as matter of fact, that one of the causes which contributed to the failure of Messrs. WRIGHT and Co. was their connection with the Oakwood Iron Works, near Neath; but we will not augur unfavourably from that fact. We may, however, state, for the information of the proprietors, that we have seen contracts for Scotch pig-iron, put on board, at 3*l.*, and Welsh bars at 6*l.*—this does not afford much encouragement for the further investment of 100,000*l.* in an undertaking of the nature of that under notice.

We have been favoured with the report presented by Mr. MATTHEIAS DUNS at the late meeting of the Durham County Coal Company, and, as it contains some "damning" statements, both with reference to that company and the Northern Coal Mining Company, it requires some little time to give it an attentive perusal ere we present it to our readers, or offer any observation on its contents. It appears to have been drawn up with much care and ability, and is well defined, comprehending, as it does, so many subjects, and those of an unpleasant nature to report upon which implicate the characters of individuals, but who, if we may believe the several communications received from correspondents (whose letters are omitted only on account of their names not being furnished in confidence), well deserve the censure and exposure to which they have been subjected. We purpose next week inserting the whole, or part, of the report—at least the important points treated upon—and should not our space admit of the insertion of the report entire, shall continue it in the succeeding Number. It should, undoubtedly, be in the hands of every member of the Northern Coal Mining Company, as well as those of the Durham County Coal Company, and, so anxious are we to do justice to all, and to afford information, that we pledge ourselves to transmit copies of the JOURNAL in which the report appears to the respective subscribers, if the directors will only instruct their Secretary to send us a list, that we may give instructions accordingly.

The meeting of the shareholders of the British Iron Company was held on Thursday, and was numerously attended. A warm discussion having taken place with reference to the acts of the directors, and the meeting having been made special on the requisition of certain proprietors, whose main object appears to be the appointment of a committee of investigation, with the view of considering the state of the affairs of the company, and determining on the course to be hereafter pursued. From the report presented by Mr. ATTWOOD, by the further payment to that gentleman of 350,000*l.*—a sum which, at this moment, with the depressed state of the iron trade, appears to us enormous. However, it appears that no better arrangement could be made. This company has been most unfortunate—robbed, as we believe them to have been, by improvident contracts in the onset, and in the hands of lawyers for the past fifteen years, little else, indeed, could be expected. The meeting was adjourned until the 10th June, when the objects for which it was specially convened will come under consideration.

#### LANGUIN IRON AND COAL COMPANY.

The operations of this company (if prosecuted with energy) tending to have a considerable influence on the imports into France of coal and iron from this country, and the company being represented as having arrived at that point, by the development of their coal-field, which justifies them in considering the propriety of immediately erecting furnaces for the manufacture of iron, we have availed ourselves of the information rendered by parties interested in the undertaking, and more especially Mr. NIXON (the engineer or viewer), in making notes of the progress made and its present position. We observe, by official returns, that the quantity of English coal imported into France in the past twelve months was 294,354 tons, the value of which may be fairly assumed at upwards of 600,000*l.*, and the exports from Belgium to France, in 1838, are given at about 400,000,000 kilograms. The quantity of iron made in France, we find, ranges from 350,000 tons to 380,000 tons per annum, of which not more than one-seventh has been made with coke—the latest return, we believe, made giving twenty-two high furnaces in activity, which, with a weekly make of fifty tons each, would give about 50,000 tons annually—and the number of furnaces for the manufacture of iron with charcoal being 443, yielding a produce of about 300,000 tons annually. With reference to the consumption of coal, we find, from official documents, that, in the year 1838, the quantity of coal raised in France was 3,113,252 tons, and that imported 1,227,838 tons—making an aggregate of 4,340,992 tons. With

these data, and the statement embodied in the paper, on the Collieries and Iron Manufactures of Belgium, inserted in another column, it will be at once seen the influence the development of the mineral resources of our continental neighbours must necessarily have on this country—and hence our directing attention to this company, more particularly from the extent of its resources, as represented to us.

The property possessed by the company is situated on the banks of the Erdre, about twenty miles from Nantes, the concession or grant being seven miles in length, on the range of the coal veins, which here take a nearly vertical declination, being 80 deg. The veins at present worked, but only partially, are three in number, varying in thickness of from twelve inches to sixty feet, which is the aggregate at the point of junction, the veins having been worked through as one mass of coal in certain parts of the old workings. The three measures, known as the north, central, and south veins, may be said to be comprehended within a space of about seventy yards, but, as already observed, in some places forming a junction. This coal is said to be the only coal known in the district of the Loire Inferieure adapted for the manufacture of iron, and yields 60 per cent. of coke of superior quality. The north vein was formerly intersected at a depth of 415 feet, by a pit sunk by the old proprietors, where the vein was found to be 3 ft. to 3 ft. 6 in., of excellent quality; the coal was, however, never worked at this point, from want of mechanical power, the coming water having only been used for unwatering the pit barrels. This pit is now, however, being cleared of water by the introduction of pumps, which has been effected to the depth of 200 feet, which are worked by the application of flat-rods to a powerful engine, erected on another part of the colliery, where a deep pit, for the "winning" of the three veins, is being sunk. Another pit, called the "Road Pit," was also put down, which took the three veins, forming a "bundle," and workings were prosecuted on the range to the extent of 250 yards, but not to any depth of consequence; the coal at this point, as, indeed, may be said to be the case in other parts of the old workings, having rather been partially proved than worked, and therefore still standing as whole ground, with such exceptions as may be found in the present statement. At Pit Emma, which is about twenty yards north-west of the latter, a depth was attained of 400 feet, where the north vein was intersected—the thickness of which was never ascertained beyond the size of the pit, 10 ft. 3 in. by 5 ft. 10 in., which was entirely in the coal. In this case, as in the former referred to, on cutting the coal a feeder of water was met with, which drowned out the workings; and the impracticability, with the power employed, of beating out the water, led to the discontinuance of further operations at this point; these two latter pits communicate with each other by levels or galleries, driven at the respective depths of 270 and 330 feet. About 800 yards to the north-west of Pit Emma another shaft is sunk to the depth of 320 feet, where the coal was cut by driving a short cross-cut, being found there to be about six feet thick. Want of power, or engineering ability, in like manner, in this case prevented the pit being sunk to a further depth, but which is now proposed to be done. Indeed, with reference to the three last-mentioned pits, active operations are being carried on for draining the old workings, and further sinking the pits, by communicating the one with the other at the lower depths. At about 130 yards further north-west, another pit has been sunk 300 feet; this pit intersected the three several measures, or veins, at a depth of 150 feet, where the thickness of the seams was forty-five feet, and has been worked to about eighty feet deeper than the point of intersection, but not to any great extent in length.

Again, further north-west 300 yards, a pit has been sunk by the present proprietors to the depth of 200 feet, at which depth another feeder was cut, which rendered it necessary to discontinue the working for a time, until extra power was obtained, by attaching flat-rods to the engine; the thickness of the vein was proved by a cross-cut from the shaft, at 170 feet depth, to be twelve feet in thickness, and which remains unworked until the pit-work is completed and the water drained. We have thus been minute in detailing the principal workings, to show the extent to which the colliery may be worked, provided it was unwatered, and that energetic measures be taken for extending the operations, by sinking the present pits to a greater depth, and opening communications by galleries, with the object of affording facility in drawing the water, as also aiding the ventilation. It will be seen that the several veins vary in thickness, as do they in their proximity to each other—at one time giving an aggregate thickness of four or five feet, in others twenty to thirty, and in some instances of fifty to sixty feet.

The operations of the present company have hitherto been principally directed to the sinking of a main engine pit, and to the re-opening of the old pits, and applying machinery for unwatering them. The principal pit on which the large engine is erected, it is contemplated will afford all the facilities necessary for unwatering the greater part of the concession, and is at present sunk to the depth of 160 feet, its size (ten feet) being divided—the one part being employed for pumping, and the other part as a winding pit. At the depth of 100 feet from surface a cross-cut was driven to intersect the south vein, which proved to be of about three feet six inches, of very superior quality, and thus affording another point from which to raise coal, which cross-cut will be continued to take the central and north veins—the coal being unworked at this part of the colliery for several hundred yards in extent. The engine is described as being equal to 350 to 400-horse power, being the largest in France, and calculated to draw 300 fathoms, being upwards of four times the depth of the lowest present works—the pumps employed varying from six to twelve inches. There are also two other engines, of English manufacture, one 20-horse power and the other 40-horse power.

Having thus given an outline of what has been done, it is necessary to see what are the prospective operations of the company, of which we consider the following brief notice will be found to be correct. First, to take the collieries, it is, we understand, intended to continue sinking the engine-pit with full force—to drive cross-cuts or galleries from thence to intersect the several veins at certain distances—to prosecute the re-opening of the old pits with all dispatch—and to proceed with the extraction of coal from the several points of working already described, or which may be opened by galleries or otherwise. Ample engine power being on the spot, several pits being opened, and communications made with a large body of coal, the colliery may, in a great measure, now be said to be nearly "won," and hence its position (from the capability of raising, within three months from the present time, coal to the extent of 120 to 150 tons per week, and in the next twelve months of 250 to 300 tons weekly), of rendering it a question whether the proprietors shall, after the outlay incurred, at once proceed to the erection of iron works.

It was our intention of entering further into a consideration of the propriety of this course, but we regret that the data we possess on this point is not more minute. There can be no question, from the evidence put before us, that the company possess a vast concession or grant of coal district, which has been proved to contain coal of superior quality—the thickness of the seams, as already shown, being of a variable nature, and ironstone is also said to abound, and may be obtained at easy cost. The calculations submitted to us would show a large profit on the manufacture of iron, but it may be questionable whether it would not be the more prudent course, during the next six months, to devote more particular attention to obtaining a stock of coal at "bank," and, further, a quantity of ironstone being acquired in the meantime that the works are in course of erection. We must, however, defer offering any decided opinion on this point until we are in possession of further data, and, in the interim, would direct attention to the paper alluded to as regards the collieries and manufactures of Belgium.

We are given to understand that about 70,000*l.* has been expended on the undertaking—the capital of the company being 100,000*l.*—thus leaving 30,000*l.* to be called for, which it is intended to apply principally to the erection of the iron works. The assay made of the ironstone which lies at surface, and is said to extend over a tract of four miles, gives 45 to 60 per cent., and an analysis of the coal 84 per cent. of pure carbon. The property is held in perpetuity, and not subject to any rent or royalty.

**PATENT WIRE ROPE.**—We are glad to find that the wire rope continues to gain ground, and that its use in the mining districts promises to become very general. At present, we hear only of Smith's patent wire rope being employed, Messrs. Newall and Co., and Mr. Heilmann, having, as far as we can learn, fallen into the back ground. We had hopes, from the nature of the machinery employed by Messrs. N. and Co., that some improvement might have been effected in the manufacture of that which is pronounced perfect, or, at least, that it might be rendered at a less rate—the latter, we are glad to find, has taken place partially.



## ORIGINAL CORRESPONDENCE.

## EMPLOYMENT OF SLAVES IN FOREIGN MINES.

TO THE CHAIRMAN, DIRECTORS, AND SHAREHOLDERS OF THE IMPERIAL BRAZILIAN MINING ASSOCIATION.

My attention has been directed to a letter in the public papers, signed Edward Harris, George Thomas, Edward Thomas, Joseph Fry, Francis Fry, Richard Fry, and Henry Tuckett, and also to a rider to your advertisement for the usual half-yearly meeting, calling a special meeting, "for the purpose of taking into consideration the propriety of emancipating the slaves held by the company, and for securing to them their future freedom."

As this question is now likely to come on for fair discussion, and as it involves many points of great and wide-spread interest, I trust that I shall not be deemed intrusive in offering to the consideration of the shareholders, through you, their chairman, some remarks which appear to me to bear upon the main point at issue. I shall not discuss the value of negro labour to the prosecution of your mining works, for, if your gold can be procured only by the infliction of injustice and misery upon your labourers, it is clearly your duty, at whatever sacrifice, to abandon the undertaking. I purpose, therefore, to examine—

1st. The state of the negro in your service, as regards his own individual happiness and means of moral improvement.

2d. The influence which his present position and example exercises upon the surrounding community.

3d. The consequences of his emancipation upon his individual happiness, and its probable effects upon his moral character.

In the consideration of the first point, it is essential to bear in mind that no just comparison can be made between the blacks of the British West India Islands and those in the employ of your association. The first are, for the most part, born upon the several estates accustomed to British habits, wants, and feelings, and, consequently, entitled to, and able to, exercise the rights of man, without detriment to themselves, or danger to the community in which they live. The latter, on the contrary, are natives of Africa, barely weaned from the savage propensities and habits of their childhood, and quite incapable of governing, maintaining, or protecting themselves. Led by the example, and instructed by the skill of the English miner, they acquire proficiency in his art, and cheerfully accompany him in his hours of labour; the task of the white man and the negro begins and ends together, and if both, or either of them, choose to extend their term of toil (which is only eight hours per day), they may, but are not forced to do so, and both are paid for the extra time that they are employed. Thus thrown together in the prosecution of a common object, a community of feeling and of interest arises between the white man and the black, and the latter, unconsciously imitating his fellow labourer, is sustained by his example in habits of regularity and industry. His individual happiness is thus improved, by the acquisition of new habits, new thoughts, and new feelings, forming an antagonist principle with the savage propensities of his uncultivated nature. His moral improvement is advanced, by finding himself a member of a well-ordered establishment, by feeling himself secure in his cottage, with the domestic comforts and supports of his wife and family, and his mind and heart are thus prepared for the reception of those higher truths which it is the duty and privilege of the association to inculcate.

I now come to the second point—viz., the influence which your negroes' present position and example exercises upon the surrounding community. It is well known, to all who witnessed the first settlement of your establishment at Gongo Soco, that a great sensation was created thereby, extending throughout the whole comarca of Sabará, even to the Diamond district. This sensation was not confined to the Brazilian miner and planter, but rumours of the English establishment spread among the negro population, who fled in numbers from their Brazilian masters, and sought a refuge among their happier countrymen at Gongo Soco. Indeed, the condition of the Gongo negro—his food, his clothing, his cottage, his moral training—formed a novel spectacle in the province of Minas Geraes, exciting the wonder, indignation, and contempt, of the Brazilian slave owner. But the matter could not rest here, for the force of example, and the force of opinion, acting slowly, though surely, have obliged the Brazilians to ameliorate the condition of their negroes, and to place them more upon a par with those at the different English establishments. But the same causes which have acted upon the masters have not been less influential upon the negroes, for these latter, finding themselves the objects of greater care and solicitude—proud of their bettered condition—have unconsciously acquired feelings of self respect, and habits of industry and self government, which have naturally raised them in the scale of humanity, increased their own happiness, and identified their well-being with that of the surrounding community. The English establishments, in the province of Minas Geraes, have thus proved a blessing, not only to the negroes in their immediate employ, but also by influencing an ameliorated treatment towards the whole black population of the province.

This brings me to the consideration of the third point—viz., the consequences of the negro's emancipation upon his individual happiness, and its probable effects upon his moral character. Unsupported by the moral control consequent on being a member of a large and well-regulated English establishment, the negro would speedily relapse into the vices almost necessarily connected with his early training—the acquired habit would quickly succumb before the natural propensity—industry would give place to idleness—temperance to inebriety—and the negro, instead of being, as now, a blessing to his family, to his employer, and to the surrounding community, would sink into a state of moral degradation, a misery to himself, and a curse to his neighbours—a living monument of the folly, not to say the wickedness, of those who, with the ruthless hand of a zeal without knowledge, would invade the quiet retreat of the African negro, tear him from his protectors and friends, and place him, unguarded and unsupported, in situations of responsibility and temptation, totally inadequate to his moral and mental capabilities.

I fearlessly appeal to those whose residence in Minas Geraes, combined with a knowledge of the Portuguese language, have enabled them to form a sound opinion on the subject, whether the above is the fanciful sketch of a dreaming theorist, or whether it does not reveal many painful realities to their recollection, for I can truly say (and I have had some experience in this matter), that I never knew an African negro emancipated from the control and moral influence of his master, who, whatever may have been his previous character, did not at once fall back upon his natural propensity of idleness and inebriety. The negroes freed by the Imperial Brazilian Mining Association, and other English mining establishments, form no exception to this remark.

Having thus briefly considered the state to which the African negroes in your employ would be reduced, if divested of the moral control and example consequent upon their present position, I beg to offer a few remarks on the effects of depriving them of your legal protection.

The difference in the habits, wants, and feelings, of the West Indian creole and the African negro, already adverted to in the first part of this letter, is not greater than is their contrasted position under the British and Brazilian Governments. The British, strong in military and naval power, have been obliged, by the force of public opinion at home, and the advanced civilization of the creole abroad, to grant an emancipation which could not safely be refused; the Brazilian Government, on the contrary, deficient in military and naval power, conscious of its weakness, is constrained, by a regard for its own safety, to view with an alarmed and jealous eye an African population, located in the heart of the empire, in numbers far exceeding those of its native subjects.

I am, indeed, informed that a deputation has waited on the Brazilian envoy, to ask him if there be any impediment to the emancipation of the Gongo negroes. The question thus framed, of course, elicited the required answer—"There is no legal impediment." But the answer would have been far different, if the question had been put with a desire to elicit the whole truth, for the real question is, whether the Government would view with unconcern the emancipation of a large body of negroes, superior, perhaps in physical power, to the constituted authorities of the province, thrown without moral guidance or control among the peaceable and thinly inhabited villages of Minas Geraes, exciting the jealousy of their now contented African countrymen in the different mines and plantations, and inevitably leading to scenes of dissension, bloodshed, and devastation.

Universal indignation would be naturally and justly raised at the flagrant outrage upon the peace of the province, and the Government, in deference to public opinion, as well as a measure of self-defence, would be constrained to interfere. The negro, unaided by your legal protection, would speedily find himself deprived of his present liberty and happiness, and placed on the wretched wretchedness of the Brazilian negro—torn from his wife and chil-

dren, would be marched to some remote part of the empire. The wife and children, alike unprotected by your legal authority, and by the vigilance of their natural guardian, would become the easy prey of the kidnapper, and soon find themselves for sale in a distant part of the province; and father, mother, and children, would live to curse the infatuation of men, who, in their blind presumption of ignorance, have stepped in the foreground, to force on measures involving the happiness or misery—nay, almost the life or death—of others, without the smallest knowledge of the subject on which they desire to legislate.

Not to be too extensive, here I must pause, leaving untouched—at least, for the present—many interesting points of this very interesting subject. But, before I conclude, I beg to address a few words to the respectable gentlemen who signed the requisition for the special meeting. I would ask them, with no unfriendly feeling, to examine themselves, whether they really know what manner of spirit they are of? for the spirit of pure philanthropy is diffident and retiring. Is your spirit diffident and retiring? Let the advertisements and newspaper puffs by which you have forced yourselves upon the attention of the public answer the question. Again—the spirit of pure philanthropy is slow to believe evil. Does this correspond with your spirit? Let the eagerness with which you have sought, and the facility with which you have credited, every tale of detraction, irrespective of the impurity of its source, answer this question. Again—the spirit of pure philanthropy is careful of wounding the feelings and character of others. Is this your spirit? Think with what bitterness of invective—with what greediness of detraction—with what active clamour—you have seized on a popular, but little understood, subject, and made it the means of casting odium and dishonour on many bodies of English gentlemen—at least, your equals in humanity, in education, in rank, and in fortune—and, having thought of these things, answer yourselves the question.

Finally, gentlemen, permit me to suggest, that this country presents a wide and diversified field for the exercise of the most unbounded benevolence. The philanthropist, undecieved by tales of foreign woes, may here verify the reality of the affliction he seeks to alleviate—may here open his hand and his heart to redress the grievances, and supply the wants, of his own countrymen—may here, without the fear of inflicting evil, by a noisy and ignorant zeal, free from the suspicion of a pitiable ostentation, follow with calmness, and in retirement, the warm impulses of his benevolent heart, and

"Do good by stealth, and blush to find it fame."

London, May 10. A FRIEND TO THE NEGRO.

## CAMBRIAN IRON AND SPECTER COMPANY.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—I am a shareholder in the Cambrian Iron and Specter Company to a considerable amount for my circumstances. When I took my shares they were fixed at 25s. per share (and inducements held out that they would only have to call for 15s. per share), with power to double the capital by the issue of additional new shares. My 25s. shares are all paid up in full, having strained every nerve to do so—and felt proud and happy that I had cleared myself of all their demands against me. The directors have lately called meetings, and have so manoeuvred, by gaining proxies, and keeping the shareholders out of the way, that at the last meeting, on the 3d inst., there were but seven or eight attended, and carried their point, with proxies, by a large majority, for the rescinding of a clause and introducing another, to enable them to raise the shares to 35s. each, which, if forced to pay, will be ruinous to me. The Deed of Settlement I have never signed nor seen. Being an old subscriber to your valuable Journal, I beg to ask your opinion and advice. Can the directors make me pay any more?—they talk of forfeiture. What injury can they do to my property which they hold? and can they deprive me of my dividends when they are declared? Your compliance with the above will greatly oblige

Littleton, near Thornbury, Bristol, May 14. R. TAYLOR.

P.S. I have not attended any of their meetings, either by proxy or person.

[We regret it is not in our power to counsel or advise our correspondent without being in possession of more material than we have at command. The Deed of Settlement, for aught we know, may contemplate an extension of capital by the issue of new shares, or increasing the liability of the shareholder; and, from the course adopted, we are led to believe that the solicitors of the company have taken the necessary precaution to ensure the legality of the acts of the several meetings held; it is, however, alone by consulting the deed that any information can be acquired or an opinion formed. It is necessary, therefore, to see the powers vested in special general meetings—the number of proprietors required to be personally present, and number of votes given on so important a question as that of increasing the responsibility of the body of shareholders. Our correspondent says he has never seen or signed the Deed of Settlement, and we presume, under such circumstances, he cannot be held bound to its provisions. Our opinion (not a legal one, be it observed) is, that an application to the Court of Chancery, to restrain the directors from forfeiture of shares, or of enforcing the payment of the additional capital (being no less a sum than 100,000l.), would be attended with success. The fact of so important a measure being carried at a meeting of seven or eight shareholders, as stated by our correspondent, is in itself sufficient grounds. We believe, however, the shares are held in but few hands, and that a certain "London Joint-Stock Bank" are largely interested. We hope, in the latter case, that the capital of individual members only, and not that of the company, is embarked in this Cambrian adventure.]

## ON MINE SURVEYING.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—It does not appear that "Hibernian" has seen the second edition of Mr. Bruff's *Treatise on Engineering Field Work*, therefore an error appears in his letter of last week, which, with his permission, I will endeavour to correct. He writes, "in p. 48 (first edition), the magnetic variation from the meridian is about 27 deg. west of north (and, besides this, there is a diurnal variation, which has been often observed to amount to 14 deg.)"—instead of which, on referring to the second edition of Mr. Bruff's work, pp. 98-99, he will find the variation from the meridian to be 24 deg. 6 min. west of north, the diurnal variation having been observed to amount to nearly half a degree, but it is usually somewhat less than fifteen minutes.

"Hibernian," in the latter part of his letter, quotes the following from Mr. Sopwith's work—"In every mining district it is most desirable that all difficulty in ascertaining the true meridian should be at once removed, by the erection of two or more conspicuous objects, placed exactly on a meridian line, which, after being projected with the most rigid accuracy, could remain as a permanent reference. This measure is indispensably necessary before any general system of preserving mineral plans can be adopted with that accuracy which can alone render them of value as a record from year to year and from age to age." The great utility of a meridian line, in a mining district, or even a comparatively small mineral property, will not, I think, be denied by any person; and, as I wish to mark one out on a property about three miles in length, for the purpose of checking the compass needle, perhaps some of your intelligent correspondents will oblige me, by furnishing a rule for doing so correctly. I remain, Sir, your's, &c.,

Aberpenny, May 19. GULIELMUS.

## ON MINE SURVEYING.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—If you will allow the following table to appear in your useful Journal, I believe it will be satisfactory to many of your practical readers. A table, similar in principle, was printed for me in 1836, by Mr. L. Newton, of Camborne, as a Supplement to the *Practical Miner's Guide*, but it has been out of print several years, and I have had various applications for copies since the impression has been distributed. The present arrangement is plainer, and will be more generally understood, than the original, as the numbers have been carried on throughout the circle, without doubling, so that there is no danger of taking out the complement instead of the true bearing. In underground surveys it is usual to register only the degree at which the north point of the needle settles, and, after we come to surface, to convert the several observations into their defined course or direction, called the bearing—which is absolutely necessary, in order to work the traverse by computation, and is always desirable. Some surveyors prefer ascertaining the bearing, as well as the degree, by observation underground, as they proceed; but this practice is attended with delay and uncertainty, especially in difficult places; but even when this method is adopted, it is satisfactory to have a table of this kind to test the falling by, after we come up, and prove that the bearings have been correctly taken. This, I presume is a sufficient introduction, and I now beg leave to state the original title of the table, with a condensed explanation, &c.:—"A Mining Table, calculated for the purposes of finding, by inspection, the bearing or direct course, corresponding with the degree taken on

the circle of the miner's compass, or vice versa, the degree belonging to any given course."

**Explanation.**—All circumferencers (dial or miner's compass) are not graduated alike. In all cases 360° stands at the north point, and 180° at the south, but some are figured toward the right-hand, from the north point (which we may call a "right-hand dial"), and others towards the left hand, so that the former has 90° at the east point, and the latter has 90° at the west. This diversity of graduation has often caused much perplexity and confusion among diallers. The following table is contrived to suit both sort of instruments, and is so plainly arranged and marked as to require but little explanation. In converting an underground survey, or any other, from angles into bearings, or when a record only has been made in the dialling-book (or field-book) of the degree at which the needle stood on every draft, it is obviously our first object to note the graduation of the instrument by which the work has been performed, and if it has been a "right-hand dial," and the first draft was on 167°, the bearing would be 13° west of south; but if it was done by a "left-hand dial," the bearing would be 13° east of south. The only thing where a liability to error at all exists in obtaining the bearings by inspection from this table, and where caution is required, is in applying the fractions of degrees when they occur in the drafts. On these occasions observe, that when the degree and bearing progress alike, as in all the left-hand side of the column, then the fraction must be added to the whole number of the bearing, but otherwise, as in the right-hand side, the fraction must be deducted from the whole number.

**Example.**—The needle stood at 246½°; what is the bearing?—**Answer.** By a right-hand dial, 23½° south of east; by a left-hand dial, 23½° south of west.

**Ex.** The bearing, by a right-hand dial, was 3½° south of east, what was the degree?—**Ans.** 264½°.

BEARING.		BEARING.		BEARING.		BEARING.	
Right-hand dial N of E		Right-hand dial S of E		Left-hand dial N of E		Left-hand dial S of E	
Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
1	40	41	91	92	142	143	44
2	42	43	92	93	144	145	45
3	44	45	93	94	146	147	46
4	46	47	94	95	148	149	47
5	48	49	95	96	150	151	48
6	50	51	96	97	152	153	49
7	52	53	97	98	154	155	50
8	54	55	98	99	156	157	51
9	56	57	99	100	158	159	52
10	58	59	100	101	160	161	53
11	60	61	101	102	162	163	54
12	62	63	102	103	164	165	55
13	64	65	103	104	166	167	56
14	66	67	104	105	168	169	57
15	68	69	105	106	170	171	58
16	70	71	106	107	172	173	59
17	72	73	107	108	174	175	60
18	74	75	108	109	176	177	61
19	76	77	109	110	178	179	62
20	78	79	110	111	180	181	63
21	80	81	111	112	182	183	64
22	82	83	112	113	184	185	65
23	84	85	113	114	186	187	66
24	86	87	114	115	188	189	67
25	88	89	115	116	190	191	68
26	90	91	116	117	192	193	69
27	92	93	117	118	194	195	70
28	94	95	118	119	196	197	71
29	96	97	119	120	198	199	72
30	98	99	120	121	200	201	73
31	100	101	121	122	202	203	74
32	102	103	122	123	204	205	75
33	104	105	123	124	206	207	76
34	106	107	124	125	208	209	77
35	108	109	125	126	210	211	78
36	110	111	126	127	212	213	79
37	112	113	127	128	214	215	80
38	114	115	128	129	216	217	81
39	116	117	129	130	218	219	82
40	118	119	130	131	220	221	83
41	120	121	131	132	222	223	84
42	122	123	132	133	224	225	85
43	124	125	133	134	226	227	86
44	126	127	134	135	228	229	87
45	128	129	135	136	230	231	88
46	130	131	136	137	232	233	89
47	132	133	137	138	234	235	90
48	134	135	138	139	236	237	91
49	136	137	139	140	238	239	92
50	138	139	140	141	240	241	93
51	140	141	141	142	242	243	94
52	142	143	142	143	244	245	95
53	144	145	143	144	246	247	96
54	146	147	144	145	248	249	97
55	148	149	145	146	250	251	98
56	150	151	146	147	252	253	99
57	152	153	147	148	254	255	100
58	154	155	148	149	256	257	101
59	156	157	149	150	258	259	102
60	158	159	150	151	260	261	103
61	160	161	151	152	262	263	104
62	162	163	152	153	264	265	105
63	164	165	153	154	266	267	106
64	166	167	154	155	268	269	107
65	168	169	155	156	270	271	108
66	170	171	156	157	272	273	109
67	172	173	157	158	274	275	110
68	174	175	158	159	276	277	111
69	176	177	159	160	278	279	112
70	178	179	160	161	280	281	113
71	180	181	161	162	282	283	114
72	182	183	162	163	284	285	115
73	184	185	163	164	286	287	116
74	186	187	164	165	288	289	117
75	188	189	165	166	290	291	118
76	190	191	166	167	292	293	119
77	192	193	167	168	294	295	120
78	194	195	168	169	296	297	121
79	196	197	169	170	298	299	122
80	198	199	170	171	300	301	123
81	200	201	171	172	302	303	124
82	202	203	172	173	304	305	125
83	204	205	173	174	306	307	126
84	206	207	174	175	308	309	127
85	208	209	175	176	310	311	128
86	210	211	176	177	312	313	129
87	212	213	177	178	314	315	130
88	214	215	178	179	316	317	131
89	216	217	179	180	318	319	132
90	218	219	180	181	320	321	133
91	220	221	181	182	322	323	134
92	222	223	182	183	324	325	135
93	224	225	183	184	326	327	136
94	226	227	184	185	328	329	137
95	228	229	185	186	330	331	138
96	230	231	186	187	332	333	139
97	232	233	187	188	334	335	140
98	234	235	188	189	336	337	141
99	236	237	189	190	338	339	142
100	238	239	190	191	340	341	143
101	240	241	191	192	342	343	144
102	242	243	192	193	344	345	145
103	244	245	193	194	346	347	146
104	246	247	194	195	348	349	147
105	248	249	195	196	350	351	148
106	250	251	196	197	352	353	149
107	252	253	197	198	354	355	150
108	254	255	198	199	356	357	151
109	256	257	199	200	358	359	152
110	258	259	200	201	360	361	153
111	260	261	201	202	362	363	154
112	262	263	202	203	364	365	155
113	264	265	203	204	366	367	156
114	266	267	204	205	368	369	157
115	268	269	205	206	370	371	158
116	270	271	206	207	372	373	159
117	272	273	207	208	374	375	160
118	274	275	208	209	376	377	161
119	276	277	209	210	378	379	162
120	278	279	210	211	380	381	163
121	280	281	211	212	382	383	164
122	282	283	212	213	384	385	165
123	284	285	213	214	386	387	166
124	286	287	214	215	388	389	167
125	288	289	215	216	390	391	168
126	290	291	216	217	392	393	169
127	292	293	217	218	394	395	170
128	294	295	218	219	396	397	171
129	296	297	219	220	398	399	172
130	298	299	220	221	400	401	173
131	300	301	221	222	402	403	174
132	302	303	222	223	404	405	175
133	304	305	223	224	406	407	176
134	306	307	224	225	408	409	177
135	308	309	225	226	410	411	178
136	310	311	226	227	412	413	179
137	312	313	227	228	414	415	180
138	314	315	228	229	416	417	181
139	316	317	229	230	418	419	182
140	318	319	230	231	420	421	183
141	320	321	231	232	422	423	184
142	322	323	232	233	424	425	185
143	324	325	233	234	426	427	186
144	326	327	234	235	428	429	187
145	328	329	235	236	430	431	188
146	330	331	236	237	432	433	189
147	332	333	237	238	434	435	190
148	334	335	238	239	436	437	191
149	336	337	239	240	438	439	192
150	338	339	240	241	440	441	193
151	340	341	241	242	442	443	194
152	342	343	242	243	444	445	195
153	344	345	243	244	446	447	196
154	346	347	244	245	448	449	197
155	348	349	245	246	450	451	198
156	350	351	246	247	452	453	199
157	352	353	247	248	454	455	200
158	354	355	248	249	456	457	201
159	356	357	249	250	458	459	202
160	358	359	250	251	460	461	203
161	360	361	251	252	462	463	204
162	362	363	252	253	464	465	205
163	364	365	253	254	466	467	206
164	366	367	254	255	468	469	207
165	368	369	255	256	470	471	208
166	370	371	256	257	472	473	209
167	372	373	257	258	474	475	210
168	374	375	258	259	476	477	211
169	376	377	259	260	478	479	212
170	378	379	260	261	480	481	213
171	380	381	261	262	482	483	214
172	382	383	262	263	484	485	215
173	384	385	263	264	486	487	216
174	386	387	264	265	488	489	217
175	388	389	265	266	490	491	218
176	390	391	266	267	492	493	219
177	392	393	267	268	494	495	220
178	394	395	268	269	496	497	221
179	396	397	269	270	498	499	222
180	398	399	270	271	500	501	223
181	400	401	271	272	502	503	224
182	402	403	272	273	504	505	225
183	404	405	273	274	506	507	226
184	406	407					



## PROCEEDINGS OF PUBLIC COMPANIES.

## BRITISH IRON COMPANY.

A meeting of the united shareholders of this company was held at their office, Castle-court, Rudge-row, on Tuesday, the 18th inst.

Major RICHARDSON in the chair.

The CHAIRMAN explained that the object of the meeting was to consider the most prudent steps to be taken at the general meeting of the directors and shareholders, to be held at the London Tavern on the ensuing Thursday, when it was resolved to move an amendment on the first resolution—"That the report be not received and adopted;" also that a "committee of twenty-one" be appointed to investigate the affairs of the company generally, and that the meeting be adjourned for one month to hear the report of that committee. Protests were also made against the liability of the shareholders for the acts of the directors—the shareholders considering the board of directors illegally constituted, according to the Deed of Settlement.—Thanks having been voted to the chairman, the meeting separated.

## BRITISH IRON COMPANY.

The annual general meeting of the proprietors of this company took place at the London Tavern, on Thursday, the 20th inst.

G. G. DE H. LARPERT, Esq., in the chair.

The CHAIRMAN proceeded to read the advertisement convening the meeting—also, the resolution for which it had been made special; and further stated there was another object, which was the re-election of the two directors going out of office in rotation, himself and Horsley Palmer, Esq., and Mr. Carr, the auditor.

Mr. SMITH (the secretary) then read the minutes of the last meeting.—The report commenced with commenting on the bad state of the iron trade, and the serious results which had been thereby occasioned to the property of the company.—The accounts were then submitted, from which it appeared that the directors had agreed to pay Mr. Attwood 350,000*l.*, and release him from all liability on his 200 shares; they had already paid him 200,000*l.*, and the balance, 150,000*l.*, was to be paid in March, 1864, interest being paid in the interim at 5 per cent. The valuation of their property was as follows:—In Staffordshire, 504,676*l.*, 3*l.*, 11*d.*; Aberystwyth, 144,004*l.*, 4*s.*, 6*d.*; Raddon, 94,924*l.*, 1*s.*, 2*d.*—making a total of 742,684*l.*, 9*s.*, 7*d.* The stock was represented as follows:—Staffordshire, 26,000*l.*; coal, 20,000*l.*; works, 15,000*l.*; other sums, representing cash and bank debts, &c., 17,000*l.*—making a total of 60,000*l.* Their minerals were further valued at 45,000*l.* per annum; the valuations presented to the meeting having been prepared with great care.—The three contracts entered into with Mr. Attwood were then read—the arguments which were urged at the meeting at which it was ultimately decided on to arrange finally with Mr. Attwood, and the opinion of the counsel whom they had consulted, and who (with the exception of Mr. Jacob) had given their unqualified opinion as to the liability of the company; Mr. Attwood, in making out his case, having shown that the minerals had been abstracted, and that there no longer remained sufficient to pay the sum which he claimed. The report further stated, that the decisions of the courts of law had been disastrous, and had been mainly instrumental in bringing on the ruinous condition in which the company was at that moment placed. It also contained a variety of accounts connected with the company, but from none of which could be caught any estimate of the liabilities as compared with the assets. It was, however, understood to be mentioned by the chairman, that by this settlement with Mr. Attwood an immense sum had been saved, considering the amount claimed, which would have swallowed up the greater part of the assets. The report concluded with a desire expressed on the part of the directors to have the fullest inquiry into their affairs, and it was agreed that it should be printed with the accounts, and sent to every proprietor. A discussion then arose on the election of two directors to fill the vacancies occasioned by the retiring of Mr. Larpert and Mr. Horsley Palmer, who, however, offered themselves for re-election. Both these gentlemen addressed the meeting, stating that without the fullest confidence could be placed in them, and without the majority by which they were elected was a large one, they would be more content to retire from the scene altogether. Calumnies had been heaped upon them, they were pointed at as the cause of all the ruin of the concern, when, in fact, it was the lawsuit in which the company had been engaged that had worked so disastrously against its prosperity. Without it was the great voice of the meeting they should wish to retire.—Some of the proprietors upon this expressed a wish that the election should not take place till after the report was in the hands of the general proprietors. They all would then have the opportunity of examining it in detail, and of testing the accounts, so that then an expression of confidence in the directors or the contrary, as the case might be, could be given upon satisfactory data.

Mr. RICHARDSON then moved the resolution, and wished to insert—"That Messrs. Horsley Palmer and Larpert be requested to accept the offices of directors," but which was overruled—the majority considering a vote of confidence would be more acceptable to those gentlemen after the investigations of the committee.—The original motion was then put and carried.

During the conversation which ensued, the directors seemed rather surprised at one of the leading members of the united shareholders stating to the meeting their non-liability to be bound by the acts of the directors—the important alterations made by them not having been made under a new deed of settlement.—Mr. LARPERT said, he regretted hearing such statements made; he thought it extremely injudicious that it should go forth to the public that their promissory notes were not worth the paper they were written on, or any other of their acts valid; however, he could not prevent such statements being made, being placed there merely to preside over their proceedings.—It was then agreed that this meeting should be adjourned to the 10th June, for the purpose of taking into consideration the several points for which the meeting had been rendered special—the proprietors in the interim leaving the report and accounts furnished them.—A vote of thanks having been passed, the meeting separated.

## BOLIVAR MINING ASSOCIATION.

An extraordinary general meeting of the proprietors of this company was held at their office, Warfield-court, on Wednesday, the 19th inst.

ALEX. M'DONALD, Esq., in the chair.

Mr. ALLEN (the secretary) having read the advertisement convening the meeting, the CHAIRMAN stated that the meeting had been assembled for the purpose of electing two managing trustees, who went out annually, in rotation, pursuant to the Deed of Settlement, when it was resolved unanimously, that W. BELLEY, Esq., of Liverpool, and A. M'DONALD, Esq., be re-elected managing trustees of the company.—The CHAIRMAN returned thanks, and said they had nothing to lay before the meeting at present, but hoped, before the general meeting, they should have some more cheering reports to submit to them.—Thanks were then voted to the chairman, and the meeting separated.

## DUKE OF CORNWALL'S HARBOUR AND RAILWAY COMPANY.

An adjourned general meeting of the shareholders of the above company was held at the London Tavern, on Thursday, the 20th inst.

JOHN RAMINGTON, Esq., M.P., in the chair.

The RESOLUTION having read the advertisement convening the meeting, the CHAIRMAN announced, that the award against Mr. Ross not being yet ready, no business could be done, and as it would be full six weeks before they could have it, he thought it would be better that this meeting should be adjourned until the next half yearly meeting, on the fourth Thursday in July, and thus avoid the expense of an additional meeting—which was agreed to.

## PROVINCIAL BANK OF IRELAND.

A meeting of the proprietors of this bank was held at their offices, on Tuesday, the 20th inst., at which our reporter attended, but was refused admittance.

## NATIONAL LOAN FUND, LIFE ASSURANCE, AND DEFERRED ANNUITY SOCIETY.

The annual meeting of the above company was held at the London Tavern, on Wednesday last, the 19th inst.

Mr. LAMIE MURRAY in the chair.

After the advertisement calling the meeting had been read, the CHAIRMAN said—Gentlemen, before the report which the directors have prepared is laid before you, I beg to make a few observations; and, first, on the part of the directors, I have to express their great pleasure in again meeting the proprietors. The report itself embodies the sentiments of the directors on all the topics therein discussed, or upon which they have felt it their duty to bring before your notice. I will, therefore, not detain you longer than to request the secretary to read it to you, and calling your attention to it.

The SECRETARY (Mr. F. CAMERON) then read the following report—

The second Annual Report of the Directors of the National Loan Fund Life Assurance Society to the proprietors.

The directors have to express their gratification in meeting, for the second time, the proprietors, on the recurrence of the annual general meeting of the society. Before the year 1863 it was not the duty of the directors to place the accounts, valuations, and profits and loss of the society, before the proprietors and the public. The Deed of Settlement provides that this should be rendered at that period. Had it been deemed expedient to have prepared a statement at this early period since the commencement of the society, the directors had the power to have done so in the present year. But inasmuch as it would have involved a disbursement of money to be made by the policy holders, which would follow after the first investigation of the business of the society, the directors have deemed it more prudent, notwithstanding their own wishes to expose the successful working of the society, to await the greater experience which the present period afforded by the deed will afford them in detailing its first business, and on which so much of its immediate future success will depend.

Since the period of the last meeting, several names acting on the policyholders

have produced impressions unfavourable to the general extension of the principles of life assurance. Notwithstanding this, the progress of the National Loan Fund Society has been steady and uninterrupted. Of these causes, it appears to the directors that two leading ones have mainly contributed to increase the magnitude of the public towards investments in life assurance as provision for a family. The first is, however, but of a temporary character; it refers to the sudden appearance and disappearance of life assurance societies, which have either become immediately extinct, or merged, after the lapse of some time, into other companies. The second is the tendency that has manifested itself within the last few years towards lower rates of premium than had heretofore been considered prudent. The competition which has existed in this respect has given rise to discontent, and a reaction has been created in favour of rates that experience had proved to be safe and well founded. While, unquestionably, the rates of premium, calculated on the Northampton tables of mortality, are found by the experience of the societies themselves who have adopted them to be too high for the contingencies of life, it must be admitted there should be a limit, below which it would not be safe to go, even in adopting more correct data of mortality than the Northampton tables exhibit. This is a subject that cannot be approached with too much gravity, as involving the deepest considerations. The more it is discussed, and the limits of premium within which an office can fulfil all its engagements fixed satisfactorily to the public mind, the more will it increase the number of those who, by means of life assurance, seek to provide for a family. No one is so much interested as the policy holder himself, that the rates which he pays to an office for his protection shall be adequate. It was after the maturest reflection, and a lengthened investigation on the subject, notwithstanding the tendency which prevailed at the period of the formation of the "National Loan Fund Society," that its present rates of premium were determined upon. The tables of the society were calculated by its eminent actuary, Mr. Woolhouse, from original data arrived at by an adjustment of the irregularities of the Carlisle tables, combined with the valuable experience of the Equitable and other tables of mortality on which former calculations had been based.

Connected with this subject, the directors see with great satisfaction, at the present moment, the announcement of a committee of the House of Commons, the result of whose investigations will, it is hoped, be a guide to popular opinion on a subject on which there prevails so great a diversity of feeling, judging from the difference in the rates of premiums considered safe by different life assurance establishments.

There is yet another subject of equal value to the policy holders—the careful selection of lives. To the importance of this point in the management of the business, the directors have paid the most watchful attention. So far in this respect the society has been fortunate. Out of the whole number of policies issued by the society only eleven of them have become claims. The total number of policies issued by the society now amounts to 141, which gives an increase on the year of 38*l.* The present annual income of the society, derived from premiums on existing policies and its investments, is equal to 2,000*l.*

The claims paid by the society since its commencement, on eleven policies, amount to 559*l.*, 1*s.*, and the sum received on short and lapsed policies, on which no claims can accrue, amounts to 449*l.*, 7*s.*, 7*d.* The latter result satisfactorily proves an increase in the business of the society on short risks since the publication of tables marked A and B in the prospectus, which are highly favourable to insurers for temporary purposes. The total number of shares disposed of amounts to 19,819, and on which the sum of 44,579*l.*, 3*s.*, has been paid.

The increasing business of the society, and the accumulation of its funds, besides the burden to the policy holders of too large a paid-up capital, has induced the directors, at the pressing instance of several influential parties interested in the society, to consider the propriety of recommending to the shareholders the conversion of the capital into shares of 20*l.* instead of 10*l.* each, the present nominal amount of each share. This recommendation, which the directors now make, has for its object the giving increased value to the stock, inasmuch as the one-third of the profits on the business of the society, which belongs to the proprietors (besides 3 per cent. on the actual paid-up capital), would then be divided on 62,599*l.* of stock, instead of 12,000*l.*, the sum originally intended to be called up, while the amount of subscribed capital, and the security to the assured, would remain the same. Without any further payment being made by the policy holders, in addition to that already paid on the 10*l.* shares (except the sum of 5*s.* per share, in respect to preliminary expenses, provided for in the Deed of Settlement), the interest of each proprietor in the profits of the company will be nearly doubled.

The directors have availed themselves of the occasion of the general meeting to place this recommendation before the proprietors for their approbation—at the same time, in the event of that, it will require the signature of each proprietor to a short deed, which the directors have ordered to be prepared for the purpose.

The directors cannot close their report without alluding to the difficulties they have met with in extending the efficient agency of the society. A very great part of the country yet remains unsupplied by any of its branches or offices. The directors have always felt unwilling to commit the society into inefficient hands, and have been careful to select only such individuals as agents who, joined to respectability, had the leisure and activity, besides a true appreciation of the extent to which, with the requisite perseverance, the principles of the society could be worked in every district of the country. The directors are happy to say that they can reckon many such individuals amongst the agents of the society, and who are now reaping the fruits of their perseverance; but there yet exists a great space where similar talents could be employed with great benefit to its interests.

The business to be transacted at the present meeting is the election of four directors, in lieu of John Elliston, M.D., F.R.S., George Langley, Esq.; Clement Tabor, Esq.; and Joseph Thompson, Esq., whose period of office has expired, all of whom are eligible to be re-elected, and offer themselves accordingly.

The election of one auditor, in place of Prof. Wheatstone, F.R.S., whose term of office has expired, and who is also re-eligible, and offers himself accordingly.

The directors have to propose John Riddell Stodart, Esq., for election as a director, and for the confirmation of the appointment by the court, as a director, of John Griffith Frith, Esq., and the election as an auditor of Professor George A.M. F.R.S., in place of the late lamented Dr. Oliphant Gregory.

The report having been read—the CHAIRMAN said, if any proprietors should now wish to address any observations to the meeting, or require any explanations from the directors, I shall be happy to hear him.

The CHAIRMAN—Since no proprietor wishes to put any question, it will now be my duty to move that "the report now read be adopted by the meeting, printed, and distributed to the proprietors." Before doing so, I would beg to call your attention to some of its statements. It is not my intention to detain you by any lengthened observations—the report speaks for itself. One thing you will find stated in it, and that is, out of the whole number of policies issued—namely, 1611, only eleven of them have become claims on the society, to the extent of 559*l.*, 1*s.*, but there is another point that is not stated in it, but on which I can now afford you information, and that is, the number of lives that, according to the calculations of the society, should have dropped, and the sum the society should have paid if the selection of lives they have made had not been better than the average expectation—that, however, I learn from the actuary, should have been twenty-three, and the sum we expected to have been called on to pay 13,100*l.* I think I say, therefore, with confidence, claim for the directors the credit for prudent deliberation on every risk that is accepted on the part of the society. Indeed, we have been frequently blamed for our caution; but when it is considered how deeply interested those who assure with the society in this respect, I think I am warranted in saying that such circumspection is valuable.

The report refers to the discussion there has been for some time carried on on the sufficiency of rates of premium. Undoubtedly the tendency has been for some years past towards low rates, and it appears as if there were undue competition in this respect. There must, however, be limits, below which nothing could be more dangerous, nothing could be more mischievous, to exceed. This disposition, however, is fortunately stopped, and it would appear as if the public mind had lent itself on the opposite course. At this moment, therefore, I am glad to see the subject is likely to be well investigated—I mean for the satisfaction of the public mind; for amongst men well acquainted with the subject of life contingencies, such an investigation by a committee of Parliament would be to them of little value; but there requires a high authority, such as a committee of that kind would be, to pronounce on this subject, and which would be a guide to those who are not able for themselves to collect all the elements of the calculation. From the foundation of this society, the directors have seen that this subject must, some time or other, come under the notice of the Legislature; and, in consequence, before we read our tables, we instituted the fullest investigation. The rates of the society will be found to give the most equal charge for any age of life; they are not low rates, nor are they so high as those founded on the Northampton tables. Another topic I would briefly allude to—the directors have always had a strong desire to increase the number of respectable and efficient agents throughout the country, as there are some points connected with this society which require the most strenuous exertion, and I can say with safety, that, in general, our agents have been more efficient, perhaps, than those of most other societies. Having addressed these few observations, I will now put the motion.—The motion having been carried unanimously.

Mr. ANDREWS (of Exeter) said, Mr. CHAIRMAN, the report, which has just been read to us, is of an cheering nature, that I think little can be said upon it. There is every thing that is calculated to fill us with hope; and, upon what I have observed in my own district, I can state that that hope will be strengthened every day. In that district, in the west, there are some very efficient agents, but many are not in the parts they have undertaken. We are doing a very fair rate of business in Exeter and other parts of Devon, with which parts I am conversant, seeing the accounts and proceedings weekly. Unfortunately, in many parts of that county this society has not been sufficiently worked. I have the pleasure to announce, however, that this very week an extensive district has been taken up by one of our agents. I have no doubt that, if other local districts will adopt the same line of conduct, we shall very soon be able to carry the operations of this society through the whole of the provinces, as originally intended.

The CHAIRMAN—I beg to say one word more with respect to agreement. It is desirable that the most efficient agents be obtained, which I believe has been done; some idea of this may be derived from the fact, that 25,000*l.* per annum is the income of this society, and, for the third year, this sum is very considerable. Success creates success, and if the future will be equal to the past, it will be very great; but I think, from all appearances, it will be even better. A great desire is manifested to obtain efficient agents, but we have always considered it better to have an agent of all than to have one not equal to the task which this society imposes. We have, since our commencement, discharged several on account of their inefficiency. As we have now so much business to enter into of this nature, I will propose that the following gentlemen be re-elected as directors for the ensuing year—John Elliston, M.D., F.R.S.; George Langley, Esq.; Clement Tabor, Esq.; and Joseph Thompson, Esq.—which was carried unanimously.

Professor Wheatstone, F.R.S., was then re-elected as an auditor; John

the method used by an eminent surveyor of mines in 1818. In his plan we have the true meridian laid down, and the magnetic variation marked as described above—I allude to a geological map of the mining district of Cornwall, between Camborne and Chacewater, by Mr. Thomas, of Perran-ar-worthal, showing the lodes, cross-courses, adits, &c. This map is now considered a standard work, and I see no reason why it may not remain as "a record from year to year, and from age to age," whatever may be the future variation of the needle from the true meridian. There is another fact stated in your correspondent's letter, which interested me much—the method adopted to ascertain the variation—viz, to erect a pole exactly perpendicular, so that its shadow at 12 o'clock shall be due north and south. But he does not state how we are to know the exact time, although it is evident that we cannot trust to any mechanical method in common use for measuring it. I will supply this deficiency by the aid of traditional evidence, of the method practised by the ancient Cornish miners. After having set up a pole, and ascertained the perpendicularity by a line fastened to the upper end of it, and extending nearly to the ground, with a plummet attached, this pole was made the centre of a number of circles drawn round it; the shadow was then carefully watched, and, when it ceased to shorten (which it did when the sun reached its meridian), a line was instantly drawn in the direction of the shadow through the centre of the inner circle. This line gave the true meridian, and formed the diameter of a circle. Another line, drawn at right angles, showed the east and west direction; and, having thus ascertained the four cardinal points, they proceeded to make further divisions, in the following manner:—The inner circle being already divided into quadrants, these were subdivided into six parts each, which represented the twenty-four hours of the day; thus our forefathers, by the most simple method conceivable, without clocks or watches, or any instrument but a long pole set upright, contrived to find the true meridian, and by it the other cardinal points, and to make a sun-dial to find the hour of the day. But this is not all; they had still another object in view—they wished to describe the position and bearing of the lodes by this division of the circle into hours; hence, they called an east and west a six o'clock lode (because the shadow of the pole lay on it at six o'clock); and we hear, in some mining districts, to this day, of a six o'clock lode—a seven o'clock, eight o'clock, and nine o'clock lode—which is certainly a mode of description more expressive and concise than that which we have used since the introduction of the miner's dial. We now use the term—an east and west lode, for six o'clock; a lode fifteen degrees south-of-east, for seven o'clock; a lode thirty degrees south-of-east, for eight o'clock, &c.; and it is worthy of remark, that the old miners made use of the true meridian in their descriptions. We moderns describe the bearing of lodes from the magnetic variation—I hope to give a short notice of the progress of mine surveying in some future communication.

I am, Sir, your's, &c.,

RICHARD TREGASKIS.

Hedruith, May 19.

## NEW IRON DISTRICT IN THE NORTH.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—Your "fishing" correspondent, Mr. Isaac Walton, at Otterburn, to induce subscribers to the Redesdale Iron Works, situated on the Moors of Northumberland, should have stated the prime cost and selling price of a ton of the pig-iron produced by ironstone and soft coal, about eighteen to twenty inches thick, got with difficulty, to supply coke ovens, for two only out of their four furnaces. The following is, I believe, a close approximation to the prime cost of one ton of the iron they are at present making and puddling in Sunderland, viz.:

Coking, time burning, engines, workmen's houses, &c.—7 tons coal, at 4 <i>s.</i> 6 <i>d.</i>	31 0
4 tons of raw stone, at 1 <i>s.</i>	4 0
Line of road, from Redesdale to Sunderland, 10 miles, at 10 <i>s.</i>	10 0
Wagon and engine, 10 miles, at 10 <i>s.</i>	10 0
Carriage on a hilly turnpike-road, from Redesdale to Hexham (fifteen miles), at 10 <i>s.</i> per ton per mile	15 0
Railway carriage from Hexham to Redheugh (twenty-one miles), at 10 <i>s.</i>	21 0
Do. from Redheugh to Monkwearmouth (12 miles), at 10 <i>s.</i>	12 0
Cartage from Monkwearmouth to Sunderland	2 0
<b>or, say 4<i>s.</i> 6<i>d.</i> per ton, for one ton of No. 4 iron.</b>	<b>43 4</b>

Now, as to the selling price, one ton of the same quality costs 3*l.* in Glasgow, from whence it is brought to Sunderland at 10*s.* freight—making the selling price, as it really is, 3*l.* 10*s.* per ton in Sunderland—hence it follows that the blast-furnaces in Redesdale, or the puddling-furnaces in Sunderland, must sacrifice 1*l.* 15*s.* per ton; to which must be added interest and deterioration of the capital at Redesdale, as given by Mr. Isaac Walton, at 30,000*l.*, also the wear and tear on furnaces, engines, coke ovens, linekilns, buildings, &c., &c.—all this may fairly be estimated at 15 per cent., or 4500*l.* per annum, which, distributed over the quantity they are making, about eighty tons per week, or 4160 tons per annum, increases the loss about 1*l.* 2*s.* per ton—making the total loss 2*l.* 17*s.* per ton, or nearly 55 per cent., equal to 11,856*l.* per annum.

This wild scheme (and another is about to commence at Bellingham under similar auspices) was projected by a person ignorant of any portion of a process for the manufacture of iron, and skillfully disposed of by him to parties connected with the Northumberland and Durham Joint-Stock Bank, in Newcastle, together with others there connected with the celebrated British Iron Company. It is a sort of Durham County Coal Company or Northern Mining Company on a small scale. Your correspondent, Mr. Matthias Dunn, examined it once professionally.

I remain, Sir, your's, &c.,

AN ENEMY TO HUNTER.

Hexham, May 17.

[Our object in giving insertion to the letter of "Isaac Walton," was not only to direct attention to the locality (with which we were not conversant as to the advantages it held out), but also to elicit information from others. We are obliged for the above communication, which at once proves the usefulness of notice being taken in our columns of new projects, whether "hunting" or otherwise.]

## NEW COMPANIES.

## SAFETY ROTATION RAILWAY COMPANY.

To be incorporated by Act of Parliament.—Capital £200,000, in 10,000 shares of £20 each. Deposit £1 per share.

By this invention, it is stated not only that considerable improvement has been made, but that the heavy expenditure required for their construction, obstacles presented by local difficulties, and liability to danger from accidents, are very materially diminished. The following description will best explain the principle:—The Safety Rotation Railway is an inversion of the ordinary construction, the wheels being made to revolve on fixed bearings, placed in two parallel lines, and the carriage (without wheels) being fixed upon a pair of running rails, carried along upon the periphery of the train of wheels, and kept in revolution by steam-engines at fixed distances—which wheels are driven by a succession of endless bands. The carriages holding forty passengers each, with luggage, do not exceed five tons; and the running rails always bearing on eight or ten wheels, so that no wheel has to support more than 10 cwt. or 12 cwt. weight. The luggage box is between the line of wheels, so as to touch below their centres—the carriages cannot, therefore, get off the road, nor can any collision take place. It is practicable by this system to ascend steep inclines, whereby the expense of tunnelling could be obviated, and that of cutting and banking considerably reduced.

The construction of a road on this principle is said to combine perfect safety in travelling, with equal, if not greater speed, and at the same time diminished fares to the public, and a higher rate of interest to shareholders. It has been ascertained that the Rotation Railway may be worked to those uses in use, and it is calculated that the cost of construction will not exceed two-thirds that now actually required, while the annual saving in maintenance will be 70 per cent. less.

It is intended to raise 10,000*l.* for defraying the necessary expenses consequent on the institution of the company, and for making a preliminary trial of the invention, by the result of which the company will be guided in their future proceedings, and beyond which trifling advance, should it fail, no responsibility can be incurred by the shareholders; should the experiment, on the contrary, succeed, of which the company entertain no doubt, the profits expected to be derived from the purchase of Mr. Hargreaves's patent rights, cannot fail to prove extensive, it being the object of the formation of the present company, to grant licenses, or contract with persons desirous of erecting railways on the proposed improved principle, the latter power being capable of being exercised only at the discretion of a general meeting of the shareholders.

The public are thus placed in the full and unreserved possession of all the views and objects of the company, who better themselves with the hope of obtaining that support and encouragement to which an invention apparently fraught with many important benefits to the country at large may be held to offer a just claim.

PAIS AND ROSEN RAILROAD COMPANY.—This company are now accomplishing the legal formalities requisite for their commencing operations in the department of the Eire.



Riddell Stodart, Esq., and John Griffith Frith, Esq., were also elected as new directors; and Professor Graves, A.M., F.R.S., as an auditor.

Mr. MILLER (of Sandhurst) moved a vote of thanks to the chairman and the other officers of the society, for their able management of the institution up to this period, which was unanimously carried.

The CHAIRMAN begged to return his sincere thanks for the mark of approbation conferred upon him and his brother directors.

A vote of thanks was then moved to the secretary, who returned thanks, and the meeting separated.—Entire satisfaction seemed to prevail throughout the whole of the proceedings.

#### ANCIENT REPORT ON MINES IN CARDIGANSHIRE.

An Essay on the Value of the Mines of Silver, Lead, and Copper, late of Sir Carbery Price, in Cardiganshire. By WILLIAM WALLER, Gent., Steward of the said Mines. With the private satisfaction of all the partners. The Second Edition. 1698.

(Continued from page 156.)

What great advantages have been made from mines and minerals in all ages, is a thing so well known, that it will be altogether unnecessary to enlarge upon it, being generally admitted in all countries abroad, and even at home in this our own nation, where many great families have been raised, or much enriched by them, besides artificers and tradesmen; and where a vast number of poor people live thereby, the very women and children finding employ therein, as well as the men, especially in the mines of lead.

The ingenious Mr. Carew, in his *Essay on the State of England*, in relation to its trade, its poor, and its taxes, hath this expression—viz., "nor is this all the product of our earth, whose womb being big with treasure, longs to be delivered, and after many throws, brings forth lead, tin, copper, calamy, coal, iron, silver, copper, and sandy other minerals, which return us great treasure from foreign markets, whether they are exported." And Sir Joseph Child, in his *Judicious Discourse of Trade*, tells us, "That our lead and tin, which are natives, and by God's blessing, inseparably annexed to this kingdom, carry on much of our trade to Turkey, Italy, Spain, and Portugal; besides great quantities that are sold to Holland, to France, and to the Indies, as is well known to all merchants that trade to those parts. But yet many gentlemen have been much discouraged of late from laying out their money upon mines, by reason of several disappointments that they have met withal; some of which were occasioned by the ignorance of common workmen, mistaking the signs of a vein for the main body, which yet an experienced artist can easily distinguish at a first sight. Some by the heaver of miners who have lodged a quantity of ore in a shaft or drift so artificially, as might deceive an ordinary spectator. Others again have been defeated in their expectations, when they have had a good vein, either by paying too high a duty to the lord of the soil, clear off all charges, or else for want of a sufficient stock to carry on their works; for when the proprietor is not able to make a just and punctual compliance in his bargains and payments, and raise a stock of ore beforehand, that work must needs stop before it's brought to perfection, and so like an house unfinished, and without a roof, must necessarily fall together into ruin and confusion; or at least the proprietor must comply to such unprofitable and disadvantageous bargains, and submit to so great expences for want of convenient fuel to carry off and drain the water from the works, as will render his designs fruitless, and the richest treasure of that kind unprofitable. And therefore whoever will begin a work of this nature, must first consider the necessary charges of making the levels, adits, shafts, smelting-houses, &c., and whether he hath a stock sufficient for all these things, and thereby to lay a right and sure foundation for so great an undertaking; for he that hath not all his money expended will be lost, and in a manner thrown away; but on the other hand, where such large veins of lead and copper ore are actually found and settled betwixt their firm and solid sides, (as these are) the lord's duty bought off, and a competent stock first raised to carry on the same with effect, and to the best advantage, there the profit is vastly great, and as certain as any estate in the world; no man living ever finding the bottom of such veins, or failing of great profit, till the works are wrought so very low beneath the levels (which in this case must be in the next age) that the water grows too hard for them.

There are in the north of England many rich mines discovered; but there is none either in England or Wales, that can pretend to come near the value of the famous mines of Sir Carbery Price, I have not read or heard of such a mine of lead in all the world, as the great vein, which is eleven foot wide betwixt its firm sides, and seven foot and a half already in pure car, which still increases downwards, and 'tis not doubted but at last it will come to eleven foot wide in car. And I humbly conceive I may confidently affirm, that no history hath yet given us an instance of so many rich mines, both of lead and copper, lying so near together, and really I cannot but think it is a great pity and loss, not only to the nation, but to the estate, but even to the whole nation, that so great a treasure should be dead and unworked, merely for want of a right understanding of the matter. And therefore I have undertaken, with all submission to better judgment, to give my opinion of the value of the same: in doing of which, if I seem to any person to exceed beyond the bounds of a moderate valuation, yet since I have wrote nothing but what I firmly believe, and durst venture my own small fortune in the world upon it; I humbly beseech the candid reader will not be offended with me for only offering such reasons to his consideration, as by long practice and experience in the mining trade, hath induced me to be of that opinion; in which I desire to be understood right; and therefore my valuation doth always presuppose that the mines are purchased free from any duty to the lord of the soil, and that a stock of 20,000*l.* be raised, whereof some part to be employed for making the levels, adits, shafts, smelting-houses, &c., and raising several stages or stemples, for a number of men to be employed together (at which time the work will be clear of all obstructions from water, and two men by blasting upwards with gun-powder, will get more ore, than six can do now with their working tools); and that the residue thereof be employed in raising a stock of ore beforehand; and also that a year's time be allowed for getting the work in order, and even then though a very considerable profit will be made; yet it is not pretended, under some years more, to bring the works to the highest valuation. And this being premised, I observe, 1<sup>st</sup>, That in the year 1690, before the copper mines were discovered, Sir Carbery Price having recovered his right from the patentees of royal mines, divided his interest therein into 4000 shares, whereof each share was valued and sold at 17*l.* per share; and for the other moiety he was afterwards offered 40,000*l.* by an eminent merchant in this city, to be immediately paid down; which he refused for this reason, that he had then demonstrated to the said Sir Carbery, and his partners, that with a sufficient stock he would be able, in a few years, with some years more, to clear a profit from the sale of the said veins, of 70,000*l.* per annum; as by a paper printed in the year 1698, may appear, and herein set forth as followeth, viz.—

6000 men employed at the great work, when the levels are up, at 5*l.* 6*d.* per tun, for getting, washing, and making merchantable, as it is now got, every two men must get above a tun by water to make them wages; but at the rate of one tun a week, the 6000 men will raise 3000 tons by week, and at fifty weeks 150,000 tons by the year; this charge of getting is 8*l.* 3*s.* 3*d.*

Carriage to the river Dorey at 1*s.* 6*d.* per tun 13,750

Is, per tun by water, and for landing it into the storehouses at the port of Aberdorey 9,750

15,000 tons of ore will make 10,000 tons of lead, smelting of this when our mills are up, at 1*s.* 6*d.* per tun 67,500

Charges 18,750

Charge of getting, washing, and smelting 18,750

Sinking shafts, and incident charges 1,125

Clear profits 70,000

Some gentlemen have considered me very much for giving in such an account, as believing this was a greater profit than can be raised from any mine in the world; but under favour, this will appear a great mistake on their side, not only from a plain demonstration of the thing, as aforesaid, but from common experience in other mines, both at home and abroad. As, first in America, the famous mine of Potosi is a sufficient instance to the contrary.

#### A DESCRIPTION OF THE MINE OF POTOSI.

This mine lies in the country of Chocoma, in a province of Peru, seventy leagues from Lima, within the tropicks, in twenty-one degrees of south latitude, and was discovered in 1545. From this great vein, which is about six foot wide, doth issue out some small springs of silver ore, and yet here they refine thirty-eight millions five hundred thousand pound weight of silver yearly, one pound weight of their yearly refined silver, which rate they refine every year, is worth in our money two hundred fifty-six thousand two hundred fifty six pence, before they can answer that account in silver; but, by Gerard Motin's account, they must raise a great deal more. The great vein runs directly north and south, dipping in the hill they have made a level which they were twenty-two years a driving, but, being very crooked and running far under ground, they carry up their ore on their backs, each man about 60*l.* weight in wattle, on a ladder made of reeds bled, three and three in a row, one of the three having a cord tied to his right thumb, to draw it up.

This vein is where twenty thousand miners, and is wrought night and day, where a thousand shafts deep—See *Annals in his Natural History of the Indies, and the History of the New World*, by N. N. And several merchants, that have travelled into those parts, relate, that this mountain, by reason of the numerous smelting-houses built upon it, doth look at a distance as if it were all on fire; and that these mines have been the occasion of building of a very fine town, at the bottom of the hill, called the town of Potosi. Thus you see what great things are done at Potosi by the poor Indians; they can raise two hundred fifty six thousand two hundred fifty six tons of silver ore in a year, and yet in England, 'tis thought a mine and a furnace, with a smelting-house, to be in a year, to be worth a nation and a nation's treasure.

so large an amount, and the least as big as any of them in the north, especially when the levels are made in a steep country, and so near the sea; but the advantage of these works may further appear, by an essay on the value of the works in the north, and these compared together, as followeth.

A SMALL ESSAY, BY A MEDIUM OF PRICES, AS ORN IS GOT IN THE NORTH, AND IN WALSLEY AT BARNIBUR, COMPARED TOGETHER.

The raising 15,000 blings of ore, at 1*s.* 6*d.* per bling, which is the middle price between 1*s.* 6*d.* and 2*s.* per bling, amounts to 22,500 0 0  
The duty allowed to the lord is one-seventh share, and a half, being 3,125 0 0  
The medium betwixt a tun and a five share, but I'll admit a seven, and that amounts to 2143 blings, and six-sevenths but I'll admit of one bling more, which makes 2153 blings, which being deducted out of 15,000 blings, there remains 12,847 blings, which, at four blings to a tun, will yield 3211 1/2 tons of smelted lead. The charges of smelting thereof at 1*s.* 6*d.* per tun, amounts to 2,410 10 0  
The incident charge is accounted one third of raising the ore, being their shafts are so very deep, and at that rate amounts to 3,750 0 0  
The middle price for carriage to the water-side, between 2*s.* and 2*s.* 6*d.* is 2*s.* 3*d.* per tun, which, for the said 3211 1/2 tun of lead, will amount to 4,336 16 0

Charges 22,500 0 0  
Let the price for lead, in both essays, be supposed to be 10*l.*, which for 3214 tons, will amount to 32,140 0 0  
Out of which the whole charge aforesaid being deducted, there remains clear profits 16,300 12 0  
Now view this account turned to Eskilshir account, and charged accordingly at a middle price, as car is now raised before the levels are made.

The raising 15,000 blings of ore, at 2*s.* 8*d.* per bling, which is 1*s.* 5*d.* 3*d.* per tun, which is the middle price betwixt 1*s.* 5*d.* 3*d.* and 2*s.* per tun, doth amount to 4,381 5 0  
This car will yield 3750 tons, being 308 tons more than in the former essay, by reason here is no duty paid out to the lord. The charge thereof for smelting, at 1*s.* 6*d.* per tun 2,182 10 0  
Sinking shafts, &c., being it lies so near the surface, is one-fourth of raising the ore 3,750 0 0  
The carriage of 3750 tons by hand, 3*s.* and by water 1*s.* in all 8*s.* 6*d.* the port Aberdorey 1,125 0 0  
3750 tun of lead, at the supposed price of 10*l.* per tun, amounts to 37,500 0 0

Clear profits 29,335 18 9

Now, That in the first essay of works in the north, it appears by computation, that 730 men must be employed for the raising of the said 15,000 blings of ore, allowing 6*s.* per week wages for every workman; now, if the same number of men, and at the same wages, be employed at Eskilshir, they will raise 30,416 blings, by reason the great vein is so much larger, and the ore is raised at so small a price as 2*s.* 8*d.* per bling, which proportionally to the first essay, being four blings to a tun, makes 3041 tons of lead, but this last essay cannot be fully perfected, without showing more at large what difference it makes, by employing seven hundred and fifty at Eskilshir.

750 men must raise 30,416 blings, to make their usual wages to every man, of 6*s.* per week, at 5*s.* 8*d.* per bling. This charge amounts as before to 41,250 0 0  
This car will yield 3041 tons of lead, which, at 1*s.* 6*d.* per tun smelting, 7,596 16 0  
Carriage by land 3*s.* and by water 1*s.* 6*d.* 2,562 4 0  
Sinking shafts and incident charges 1,670 0 0

Charges 41,250 0 0

3041 tun of smelted lead, at 10*l.* per tun, is 30,416 0 0

Clear profits 27,872 19 9

So that hereby it plainly appears, that the same number of workmen that bring in a profit of 10,360*l.* in the works of the north, being employed in the great vein above-described, would bring in a clear profit of 70,776*l.* 19*s.* 9*d.* per annum.

It is further objected by some, that so great a number of men cannot be employed in any one work, and though all the other parts of the calculation must be allowed to be true, yet it will fall in that particular.

Ans. That in Arkendale Works, in Yorkshire, which is a small vein, about two foot wide, there was 600 men employed in three shifts, 200 men at a shift, every eight hours, and only one man in a breast, whereas this great vein employs six men in a breast, on every stage or stemple, and more stages can be raised there than could be done in Arkendale Works; and in the work of my Lord Darwenwater was employed above 600 men. At Keswick in Cumberland, was employed 4000 men in one mine. In Cornwall, and some of the tin works, employs above 1200 men, and in Germany they employ a greater number, and so in Swedenland, Hungary, Poland, &c., but in the West Indies (to wit), and in some mines above 2,000 men are employed in a work, as at Potosi aforesaid, and even in those very works, in Eskilshir in two yards space, at three shifts, every eight hours, was employed eighteen men at a shift, fifty four men in every twenty-four hours; and, with a reasonable stock, twenty such distances may be made, which will employ, at the same rate, above 1000 men. Windschicht Mine in Hungary, employs 2000 men. Fide Brown's Treatise, p. 99.

But this is a new discovery, and, consequently cannot succeed in the first adventures hands: the truth is, that the profit appears so very considerable, that 'tis there nothing of any moment to be objected against it, yet the greatness of the thing makes it seem incredible, for, say they, such a thing was never heard of in England, therefore it is impossible it should ever happen; this is the force of the objection, but, as there is a reason offered, so let reason be opposed, and then the matter will come to a fair determination; for the very same objection was made against the project of the New River water, where a share was said to be valued at first at not more than 100*l.* soon after at 300*l.* and afterwards thirty-six shares were sold for 181,000*l.* to Simon Middleton, a merchant, and the whole interest of the New River water is valued at this day at 300,000*l.* at the least.

The General and Penny-stamp Office were at first extremely in doubt, and projects, and objections in the beginning, and yet came afterwards to be of great value, and these things though demonstrated at first, yet were not believed, and no reason could be opposed, but only the greatness of the proposal made them seem improbable. And though every new trade and voyage, the merchant contrives, is at first a project, and so by consequence, the trade to the East-Indies, Turkey, Africa, and Hudson's Bay, &c. were mere projects in the original, and the first beginning of these mines might be said to be a project, in some respect, by reason of the uncertainty, before they had found the veins; yet I cannot now allow, that there is anything in this undertaking, that is so much as looks like a project, since every thing is reduced to a certainty before hand, the veins being long since discovered, fixed and settled betwixt their firm and solid sides, near a hundred tons of ore got out of them, till the water grew troublesome, and the plans could not agree to raise a sufficient stock, for bringing up a level to drain the water from them; but if a man has 1000 acres of the richest meadow ground, and has no stock of cattle himself, nor will buy a stock, or rent the same meadow ground out to others that have one, all that rich land must lie dead and unprofitable, and yet without any disagreement to the goodness of the land; so if a man has the richest mines in the world, even Potosi itself, and yet is not willing himself to raise a competent stock to make levels, &c., and carry on the works, nor will part with them to others that are; he can expect no profit from them, though ever so rich and profitable in their own nature; and this accident does not lessen the intrinsic value of the mines to men that have both stock and skill to manage them.

And to such it is not doubted, but these mines, in a few years will be worth above a million of money, for, to return, if this great vein will yield so much stone, what will all the other veins yield, which are great in number? Besides the two copper veins, say, taking one with another, more large than any in the north; the Lord Darwenwater received 12,000*l.* per year, the 8th day of every month, I hope I may modestly compute every one of the five veins at 15,000*l.* per annum each, for the whole interest thereof (there being no duty to be paid to the lord of the manor) which in the whole is 60,000*l.* per annum more. And so much for the lead mines only. [To be concluded in our next.]

INSTITUTION OF CIVIL ENGINEERS.—At the usual weekly meeting of this institution, on Tuesday evening, several interesting papers were read. One from the Hon. Mr. Stewart, on the application of pest to the purpose of building "sea walls," excited considerable interest. The author described some embankments constructed with it on the estates of his brother the Earl of Galway, to reclaim various portions of land, to the amount of many hundred acres, and stated that it had been found to answer extremely well, for several reasons, the most prominent of which were, that the blocks of pest, when well rammed down, grew together, thus forming a most complete "puzzle" wall; and that from its spongy nature it was not liable to crack in dry weather like clay, when any portion of it was in water, as moisture was in that case drawn up to all parts of it.

THE FOSSIL TREES IN CRAIGLITH AND GRANTON.—At the last meeting of the Geological Society, a member described the valuable researches of Mr. Nicol, on the internal structure of the extinct forest found in the synchronous sandstone deposits of Granton and Craigheth. Most of our readers must have seen the beautiful method employed by Mr. Nicol to render, by excessive thinness, sections of fossil wood transparent, for the purpose of observation in the microscope. Through this instrument, sections, transverse and longitudinal, of all recent woods and most of the fossil species, display a beautiful organic structure, which, without any other test, Mr. Nicol has employed as decisive of generic and specific character. This discovery, so simple and ingenious, has, in the comparison of fossil trees in Craigheth and Granton, afforded a point of great interest to the geologist. In the specimens from Craigheth, a transverse section exhibits through the microscope, a great distortion of the sap vessels, altering in some places their shape, and in others filling them entirely up; evidently suggesting that the trees, while undergoing the change of petrification, have been subjected to the influence of great moisture and pressure. In the longitudinal section, parallel to the medullary rays, the small hexagonal annuli, which are the characteristics of the araucarian plants, are nearly as distinct as those which now afford a shelter to the gnaty prospect of Norfolk Island. In the sections made of the crinoid fossils, the transverse structure is much better preserved, and shows the openings are of the same character as in Craigheth, while in the longitudinal section all the diaphragms or annuli are more or less different. Where the annuli are more distinct, a decided difference is recognised both in shape and arrangement compared with those in the Craigheth specimens. These appearances

\* That two blings and one half is one tun of ore; but four blings is allowed by statute to be a tun of lead.

afford, for the geologist and the student of vegetable physiology, a field of great interest, and we hope that these appearances will enable us soon to decide the question whether these fossils belong to different species, or have, in the process of petrification, been subjected to different agencies.—*Calcutta Mercury.*

SOUTH WALES COAL DISTRICT.—On Thursday, the 6th inst., another new colliery commenced operations on the line of the Llanelly Railway, and a district of country west of the Cwm Amman Valley has thus been opened, by a railway connection with the sea. The Glanash branch (prolonged to collieries on the manors of Earl Cawdor and the Lord Bishop of St. David's) has this week been shown to be in such a state of forwardness as to convey coal the entire line, and the Myawdd Mawr Company have availed themselves of this condition, by sending down largely since the above period. We have from time to time examined many specimens of stone coal, but we have seen none more pure than this, nor none more likely in the market to rival the fame of Pembroke-shire anthracite; and we congratulate the railway company on this important accession to their trading prospects—a congratulation we offer in perfect sincerity, since that enterprise which induced the formation of this line of railway deserves its reward.—*Cambrian.*

SCOTCH SYSTEM OF BANKING.—We have learned from an authority upon which we are inclined to place reliance, that the Government have no intention of interfering with the Scotch system of banking.

GREAT WESTERN RAILWAY.—This magnificent line of railway is fast approaching completion; the most strenuous exertions are being made for the accomplishment of that desirable object; on the 31st it will be extended to Chippenham (ninety-five miles), and the opening of the entire line, it is now said, will, without doubt, take place in June or July.

CAUTION TO MINERS.—On Thursday, the 13th inst., a fire took place at Foul Las plantation, in the parish of Llanarmon, belonging to D. Thackeray. It was occasioned by the carelessness of a man who was carrying a piece of lighted rope through the woods, when a spark fell among the gorse, and other highly combustible materials. Happily it was not far from the mine, where his partners were at work, who immediately assisted in arresting the progress of the fire, otherwise the mischief might have been very serious, the plantation consisting of upwards of eighty acres in a ring fence. The fire extended over one acre, upon which all the oaks and larches of many years' growth were totally consumed.

#### PRICES OF MATERIALS IN CORNWALL.

AS SUPPLIED AT THE PRINCIPAL MINES IN THE FOLLOWING MONTHS

	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
Common iron, per cwt. . . . .	58	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629																																																																																																																																																																																																																																																																																																																																																																																																																																			



## MONEY MARKET AND CITY NEWS.

## CURRENT PRICES OF ENGLISH AND FOREIGN FUNDS.

Consolidated Money, 80 1/2	Dutch, 2 1/2 per Cent., 77 1/2
Consolidated Account, 80 1/2	Dutch, 2 1/2 per Cent., 77 1/2
New 3 1/2 per Cent. Annuities, 80 1/2	Dutch, 2 1/2 per Cent., 77 1/2
Reduced 4 per Cent. Annuities, 80 1/2	Dutch, 2 1/2 per Cent., 77 1/2
Reduced 5 per Cent. Annuities, 80 1/2	Dutch, 2 1/2 per Cent., 77 1/2
Long Annuities, 12 1/2 to 13 1/2	Russian, 5 per Cent., 112 1/2
Bank Stock, 168 1/2	Russian, 5 per Cent., 112 1/2
Bank of England, 10 1/2	Russian, 5 per Cent., 112 1/2
Bank of France, 10 1/2	Russian, 5 per Cent., 112 1/2
Bank of Italy, 10 1/2	Russian, 5 per Cent., 112 1/2
Bank of Spain, 10 1/2	Russian, 5 per Cent., 112 1/2
Bank of Portugal, 10 1/2	Russian, 5 per Cent., 112 1/2
Bank of Greece, 10 1/2	Russian, 5 per Cent., 112 1/2
Bank of Turkey, 10 1/2	Russian, 5 per Cent., 112 1/2
Bank of Persia, 10 1/2	Russian, 5 per Cent., 112 1/2
Bank of India, 10 1/2	Russian, 5 per Cent., 112 1/2
Bank of China, 10 1/2	Russian, 5 per Cent., 112 1/2
Bank of Japan, 10 1/2	Russian, 5 per Cent., 112 1/2
Bank of Siam, 10 1/2	Russian, 5 per Cent., 112 1/2
Bank of暹羅, 10 1/2	Russian, 5 per Cent., 112 1/2
Bank of安南, 10 1/2	Russian, 5 per Cent., 112 1/2
Bank of爪哇, 10 1/2	Russian, 5 per Cent., 112 1/2
Bank of菲律賓, 10 1/2	Russian, 5 per Cent., 112 1/2
Bank of荷屬東印度, 10 1/2	Russian, 5 per Cent., 112 1/2
Bank of暹羅, 10 1/2	Russian, 5 per Cent., 112 1/2
Bank of安南, 10 1/2	Russian, 5 per Cent., 112 1/2
Bank of爪哇, 10 1/2	Russian, 5 per Cent., 112 1/2
Bank of菲律賓, 10 1/2	Russian, 5 per Cent., 112 1/2
Bank of荷屬東印度, 10 1/2	Russian, 5 per Cent., 112 1/2

**SATURDAY.**—Although the Consol market assumed a better tone in the course of the day very little business was in fact transacted, and the only operation calling for remark was the exchange of 2 1/2 to 4 per Cent. stock in the London Annuities, which, however, did not particularly affect the value of either security.

The foreign securities were also but little dealt in, but Spanish stock left off a trifle better than it opened, the Actives were finally quoted 14 to 15.

The railway share market continued depressed.—Colonial Bank, 35 1/2; Union of Australia, 34 to 35.

**MONDAY.**—Political rumours influenced the Consol market in the course of the day, and though they were of a nature to which credence could not well be given, it closed firm, with prices a shade higher than Saturday. Consols for Money opened at 80 1/2, touched 80, and closed at 80 1/2. For the Account they opened at 80, touched 80 1/2, and closed at 80 1/2. A sale of Exchequer Bills was made during the hours of business at par, but this affords no criterion of the value of money, as this was not a money day, the sale, it is understood, being effected to supply part of the funds necessary for the payment of the first dividend under Messrs. Wright's bankruptcy, the last quotation of Exchequer Bills was 10 to 10 1/2 per Cent. Bank Stock closed at 167 1/2 to 168 1/2; India Stock, 25 to 26 1/2 per Cent. Reduced, 80 1/2 to 81 1/2; New 3 1/2 per Cent. Annuities, 80 1/2 to 81 1/2; Reduced 4 per Cent. Annuities, 80 1/2 to 81 1/2; Reduced 5 per Cent. Annuities, 80 1/2 to 81 1/2.

In the foreign stock market business is as inactive as ever. The state of the Lisbon treasury seems to have depressed Portuguese in a trifling degree, and Spanish has also rather declined, as compared with Saturday, although the better appearance of our own funds caused values to rally generally before the final close of business. Spanish Actives left off 2 1/2 to 4 per Cent. stock, 14 to 15; ditto 3 per Cent. stock, 14 to 15; ditto 2 1/2 per Cent. stock, 14 to 15; ditto 2 per Cent. stock, 14 to 15; ditto 1 1/2 per Cent. stock, 14 to 15; ditto 1 per Cent. stock, 14 to 15; ditto 1/2 per Cent. stock, 14 to 15; ditto 1/4 per Cent. stock, 14 to 15; ditto 1/8 per Cent. stock, 14 to 15; ditto 1/16 per Cent. stock, 14 to 15; ditto 1/32 per Cent. stock, 14 to 15; ditto 1/64 per Cent. stock, 14 to 15; ditto 1/128 per Cent. stock, 14 to 15; ditto 1/256 per Cent. stock, 14 to 15; ditto 1/512 per Cent. stock, 14 to 15; ditto 1/1024 per Cent. stock, 14 to 15; ditto 1/2048 per Cent. stock, 14 to 15; ditto 1/4096 per Cent. stock, 14 to 15; ditto 1/8192 per Cent. stock, 14 to 15; ditto 1/16384 per Cent. stock, 14 to 15; ditto 1/32768 per Cent. stock, 14 to 15; ditto 1/65536 per Cent. stock, 14 to 15; ditto 1/131072 per Cent. stock, 14 to 15; ditto 1/262144 per Cent. stock, 14 to 15; ditto 1/524288 per Cent. stock, 14 to 15; ditto 1/1048576 per Cent. stock, 14 to 15; ditto 1/2097152 per Cent. stock, 14 to 15; ditto 1/4194304 per Cent. stock, 14 to 15; ditto 1/8388608 per Cent. stock, 14 to 15; ditto 1/16777216 per Cent. stock, 14 to 15; ditto 1/33554432 per Cent. stock, 14 to 15; ditto 1/67108864 per Cent. stock, 14 to 15; ditto 1/134217728 per Cent. stock, 14 to 15; ditto 1/268435456 per Cent. stock, 14 to 15; ditto 1/536870912 per Cent. stock, 14 to 15; ditto 1/1073741824 per Cent. stock, 14 to 15; ditto 1/2147483648 per Cent. stock, 14 to 15; ditto 1/4294967296 per Cent. stock, 14 to 15; ditto 1/8589934592 per Cent. stock, 14 to 15; ditto 1/17179869184 per Cent. stock, 14 to 15; ditto 1/34359738368 per Cent. stock, 14 to 15; ditto 1/68719476736 per Cent. stock, 14 to 15; ditto 1/137438953472 per Cent. stock, 14 to 15; ditto 1/274877906944 per Cent. stock, 14 to 15; ditto 1/549755813888 per Cent. stock, 14 to 15; ditto 1/1099511627776 per Cent. stock, 14 to 15; ditto 1/2199023255552 per Cent. stock, 14 to 15; ditto 1/4398046511104 per Cent. stock, 14 to 15; ditto 1/8796093022208 per Cent. stock, 14 to 15; ditto 1/17592186044416 per Cent. stock, 14 to 15; ditto 1/35184372088832 per Cent. stock, 14 to 15; ditto 1/70368744177664 per Cent. stock, 14 to 15; ditto 1/140737488355328 per Cent. stock, 14 to 15; ditto 1/281474976710656 per Cent. stock, 14 to 15; ditto 1/562949953421312 per Cent. stock, 14 to 15; ditto 1/1125899906842624 per Cent. stock, 14 to 15; ditto 1/2251799813685248 per Cent. stock, 14 to 15; ditto 1/4503599627370496 per Cent. stock, 14 to 15; ditto 1/9007199254740992 per Cent. stock, 14 to 15; ditto 1/18014398509481984 per Cent. stock, 14 to 15; ditto 1/36028797018963968 per Cent. stock, 14 to 15; ditto 1/72057594037927936 per Cent. stock, 14 to 15; ditto 1/144115188075855872 per Cent. stock, 14 to 15; ditto 1/288230376151711744 per Cent. stock, 14 to 15; ditto 1/576460752303423488 per Cent. stock, 14 to 15; ditto 1/1152921504606846976 per Cent. stock, 14 to 15; ditto 1/2305843009213693952 per Cent. stock, 14 to 15; ditto 1/4611686018427387904 per Cent. stock, 14 to 15; ditto 1/9223372036854775808 per Cent. stock, 14 to 15; ditto 1/18446744073709551616 per Cent. stock, 14 to 15; ditto 1/36893488147419103232 per Cent. stock, 14 to 15; ditto 1/73786976294838206464 per Cent. stock, 14 to 15; ditto 1/147573952589676412928 per Cent. stock, 14 to 15; ditto 1/295147905179352825856 per Cent. stock, 14 to 15; ditto 1/590295810358705651712 per Cent. stock, 14 to 15; ditto 1/1180591620717411303424 per Cent. stock, 14 to 15; ditto 1/2361183241434822606848 per Cent. stock, 14 to 15; ditto 1/4722366482869645213696 per Cent. stock, 14 to 15; ditto 1/9444732965739290427392 per Cent. stock, 14 to 15; ditto 1/18889465931478580854784 per Cent. stock, 14 to 15; ditto 1/37778931862957161709568 per Cent. stock, 14 to 15; ditto 1/75557863725914323419136 per Cent. stock, 14 to 15; ditto 1/151115727451828646838272 per Cent. stock, 14 to 15; ditto 1/302231454903657293676544 per Cent. stock, 14 to 15; ditto 1/604462909807314587353088 per Cent. stock, 14 to 15; ditto 1/1208925819614629174706176 per Cent. stock, 14 to 15; 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